THE COMPLETE MEDICAL ENCYCLOPEDIA AND HOUSEHOLD DOCTOR

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PREFACE

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THIS Encyclopedia is compiled to meet the needs of the average man and woman. It deals in plain language with every question of health and disease—with trivial ailments, when a doctor's advice is not essential, and with graver symptoms, disregarded at the reader's peril. Both of these categories are clearly and fully explained.

Unnecessary technical terms have been avoided; their inclusion would have confused rather than helped the general reader. The Encyclopedia is designed to be of swift assistance in all cases of accident, illness and emergency; and to impart information which everybody who values health and fitness should possess.

A Special Appendix, entitled "Health in the Home," is included, to deal at greater length than was available in the Encyclopedia with such vital questions as Preparing For Motherhood, the Care of the Child, Beauty, Physical Culture, Invalid Cookery, Sick Nursing, etc., etc.

Users of the Encyclopedia are advised in all cases to consult the index. The subjects in which they are interested may be discussed under more than one heading, or in a section with which they have not become familiar.

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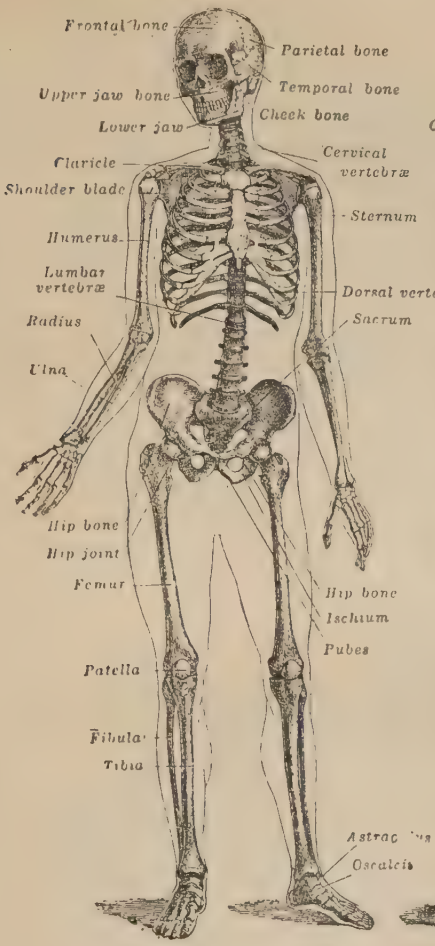
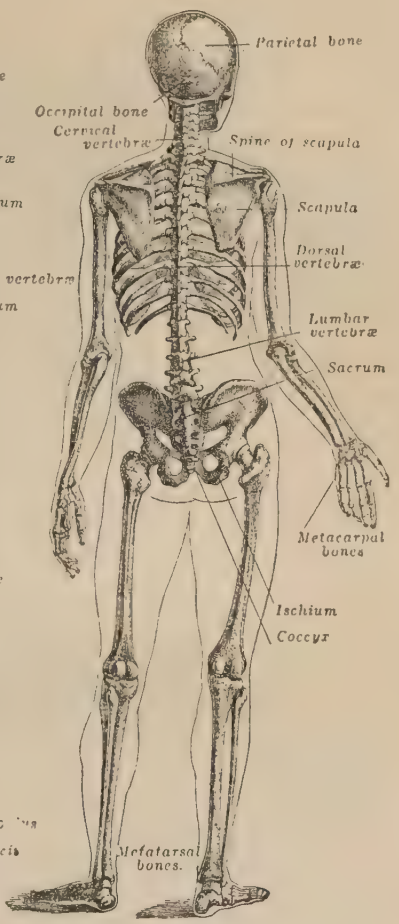


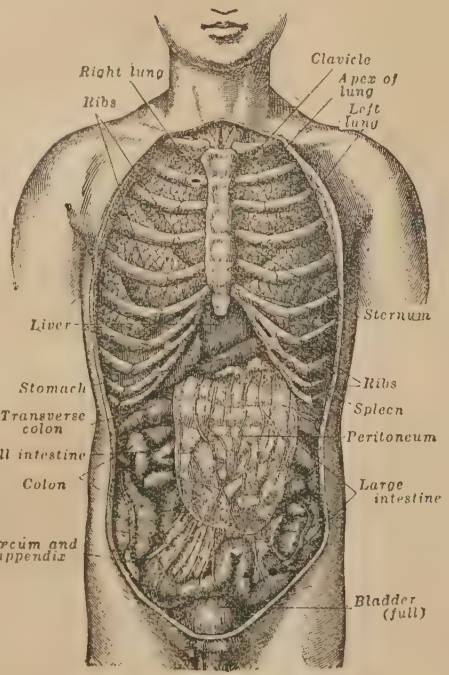
SKELETON (Front)

Fig. 1.



SKELETON (Back)

Fig. 2.



INTERIOR OF CHEST AND ABDOMEN AFTER REMOVAL OF SKIN AND MUSCLES.

Fig. 3.

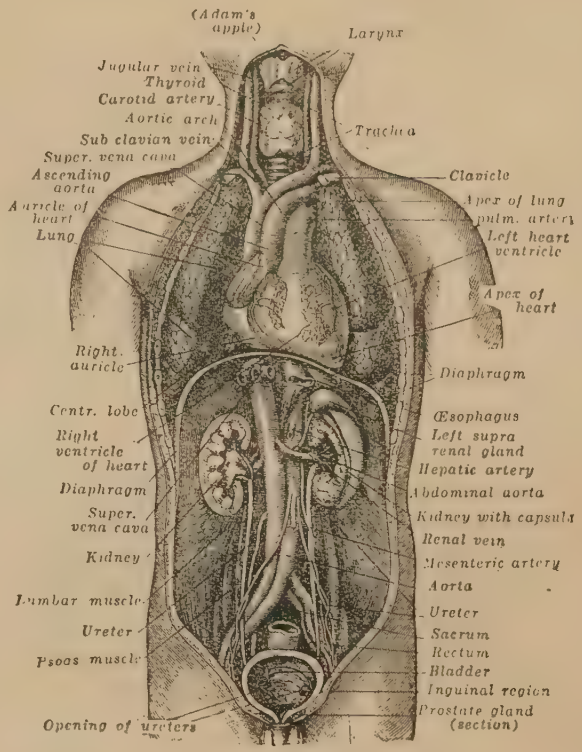


Fig. 4. *INTERIOR OF NECK, CHEST, AND ABDOMEN. THE LUNGS ARE MOVED ASIDE, AND THE SUPERFICIAL ABDOMINAL ORGANS REMOVED.*

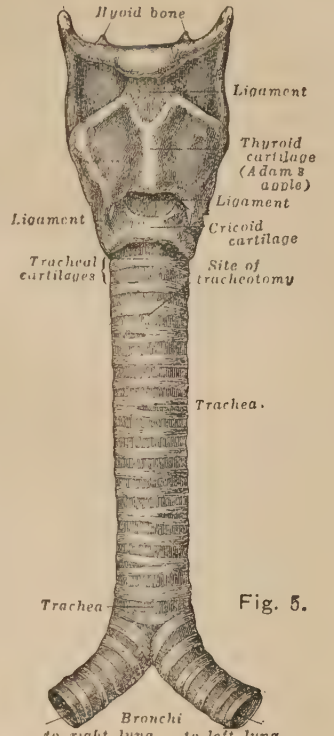
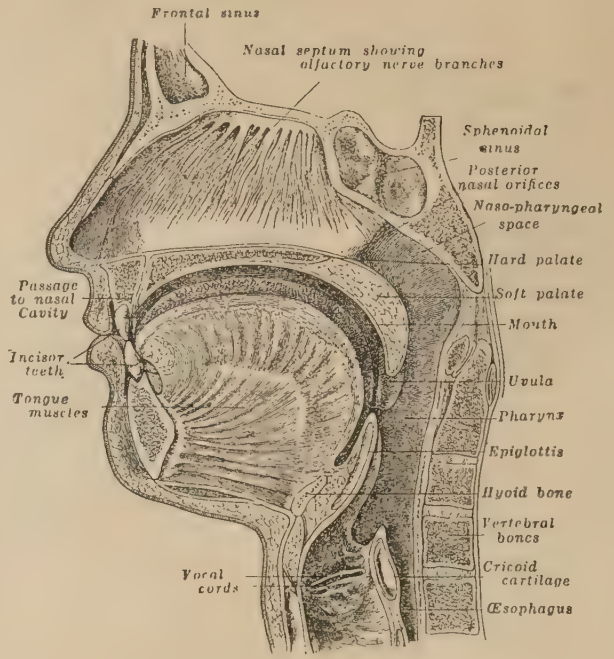


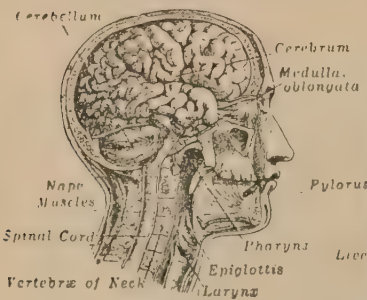
Fig. 5.

LARYNX, TRACHEA, AND BRONCHI (Front View.)



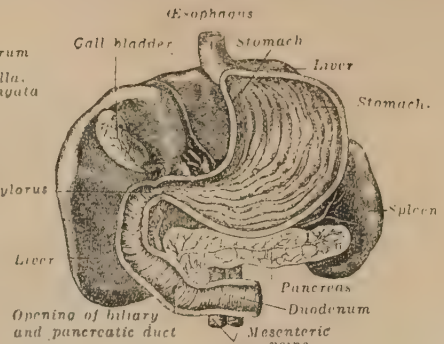
CAVITIES OF MOUTH, NOSE, AND PHARYNX (Sectional View).

Fig 6.



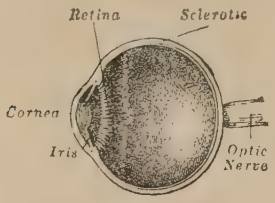
BRAIN, ETC

Fig. 7.



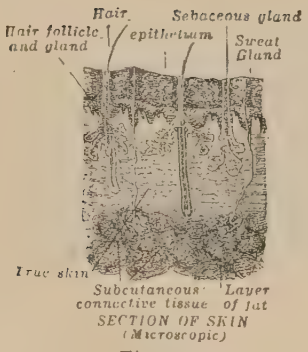
STOMACH AND OTHER DIGESTIVE ORGANS.

Fig. 8.



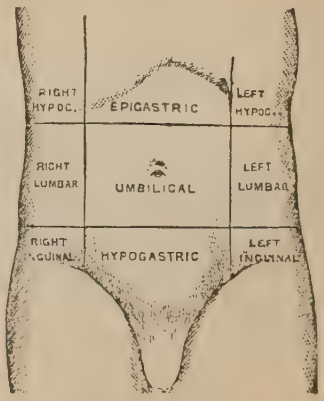
VERTICAL SECTION OF EYEBALL.
(Viewed from inside.)

Fig. 9.



SECTION OF SKIN
(Microscopic)

Fig. 10.



ABDOMINAL REGIONS.

Fig. 11.

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(The reader is requested to turn to the "Index and Medical Glossary" at the end of the book when confronted by a term with the meaning of which he is not familiar or when looking for one not forming a separate heading.)

Abasia-Astasia **1**

A condition of which the most prominent symptoms are the inability of the sufferer either to walk or stand erect and which does not arise from obvious causes, such as paralysis, drunkenness, an accidental injury, etc. The healthy appearance of the patient as well as the strength of the muscles are not consistent with the severity of the symptoms. The illness is regarded as a form of hysteria or functional neurosis, and as such, amenable to treatment by psychotherapy. (*See also under* "Hypnotism.")

Abdomen, Diseases of the **2**

The following are the principal organs within the abdominal cavity. and the most frequent diseases in that region proceed from one or more of them; Stomach (under the breast-bone) and intestines; liver and gall-bladder (more to the right); spleen (on the left side); kidneys (one on each side, inclined towards the back); bladder (lower down in the centre, towards the front); uterus (or womb) and the ovaries (in females, situated between the bladder and the lower end of the intestines). The following are a few useful hints relating to the presence or absence of abdominal disease.

A wrinkled skin of the abdomen is common in old people, and also in those who are emaciated through malnutrition or chronic illness of any sort.

White, glistening, longitudinal lines on the abdominal skin, especially in the groins are known as "lineæ albicantes" and are a sign of a previous distension of the abdomen either through pregnancy, tumour, dropsy or obesity.

A number of dilated veins on the surface of the abdomen is generally a sign of cirrhosis of the liver caused by intemperance.

Marked pulsation of the abdomen may be a sign of aneurysm of the abdominal aorta, or it may be a symptom of neurasthenia.

A retracted or hollowed abdomen in thin and emaciated persons is not of any seriousness, but if such retraction is accompanied by pain and rigidity, the cause lies probably in colic arising from lead-poisoning or the passage of a gall-stone, or of a stone in the kidney.

If a tumour inside the abdomen appears to be moving along with the movements of respiration (breathing), the affected organ is most likely the liver or the spleen.

Abdominal Pain **3**

The most frequent causes of sudden pain in the region of the abdomen are: Indigestion and flatulence proceeding from the stomach; intestinal colic proceeding from the bowels; inflammation of the intestines, including appendicitis; gall-stones; strangulated hernia, and renal colic. It is a mistake to treat every case of sudden abdominal pain with purgatives; the safest course to adopt, until medical aid can be obtained, is to put the patient to bed and to apply hot fomentations to the abdomen.

If the pain has come on suddenly and is very severe, one should think of the possibility of an injury or internal perforation.

If it is of a paroxysmal character and accompanied by vomiting or retching, a rapid pulse, cold sweat, and other signs of collapse, the likely cause is an attack of gall-stones or renal colic.

So-called lightning or lancinating abdominal pains—coming and disappearing with great rapidity are one of the characteristic signs of locomotor ataxy.

A persistent gnawing pain in a person over 45 years of age should be looked upon with suspicion as being possibly due to cancer of the stomach or liver. In younger people it is generally caused by ulcer of the stomach or of the duodenum. In the latter the pain is severe some hours after a meal, in the former almost immediately.

Elderly persons suffer occasionally from recurrent attacks of severe and sudden abdominal pain similar to that of angina pectoris, and the name of abdominal angina has been given to the illness.

Abdominal Tumours **4**

A swollen abdomen may be due to dropsy, tumour or inflammation of one of the internal organs, or to diseases of the abdominal wall. Among the latter, may be included the various kinds of tumour which affect the skin and muscles generally, abscesses, cysts, spasmodic contraction, elephantiasis, etc. A superfluous quantity of fat in obese people sometimes simulates a tumour.

Flatulence, too, is occasionally mistaken for a tumour. Mention must also be made in this connection of the so-called "phantom tumour." Hernia or rupture, especially of the ventral or umbilical kind, is sometimes wrongly spoken of as a tumour. The conditions referred to in the above remarks will be found described under their respective headings.

Abnormalities **5**

Deviations from normal and natural conditions. Some are congenital, which means present at birth, and others acquired through accident or disease. They are also called malformations, or deformities. An example of congenital abnormality is for instance, that known as syndactilism, and one of the acquired kind is for instance, the condition familiar as curvature of the spine. Congenital abnormalities are often also hereditary, but not always. This is a point of considerable importance.

Abscess **6**

An abscess is a localised and circumscribed accumulation of "pus" or "matter." Herniæ, tumours, and swollen glands, are often mistaken for abscesses, and poulticed so that they may come to a head, which, of

course, they never do. The most characteristic sign of an external abscess is its "fluctuation," which can be obtained by pressing against it alternately with the two forefingers. Other signs are redness, heat, swelling and pain. It is always better to incise an abscess than to wait until it bursts; not only is the patient relieved sooner of his pain, but the scar which remains behind is, as a rule, less unsightly. As long as an abscess is not ripe for incision or bursting, its coming to a head may be hastened, and pain may be eased, by the application of hot linseed-meal or boracic poultices, sprinkled with opium tincture (laudanum) or of hot poppy fomentations.

Abscess, Cold or Chronic **7**

Sometimes an abscess takes a long time—may be months, before it comes to a head. It is neither hot and red nor painful like an ordinary abscess, except when it is about to burst. In children and young persons particularly such abscesses are apt to occur, the parts usually affected being the spine, the hips, joints, and glands. They are really one of the forms of tuberculosis, and caused by the invasion of tubercle bacilli probably through the medium of the blood circulation. For this reason they are also called tuberculous abscesses.

The treatment, apart from surgical measures, is the same as that of tuberculosis generally. Cod-liver oil is of especial use in these cases, and so is syrup of iodide of iron in teaspoonful doses three times daily after food. The preparation known as ferro-sajodin is an improvement upon the latter, and can be given conveniently in the form of tablets.

Abscesses, Successive **8**

When a person suffers from a succession of abscesses in different parts of the body, it is a sign that his blood is poisoned. Medical treatment then becomes a necessity, as some cases of this sort are exceedingly dangerous. In any case, the patient's strength should be sustained by proper and nourishing food, abstention from alcohol, as the latter adds to the feverishness which is generally present, fresh air and sunshine. Such patients derive great benefit from cod-liver oil and a prolonged course of calcium sulphide, which may be taken in tabloid or pill form, one quarter-grain three times daily after food. The Harrogate springs owe much of their beneficial action in cases of this kind to the calcium sulphide which they contain. It is well to remember that often the cause of a crop of abscesses or boils lies in a defective drain. Of recent years more or less obscure cases of successive abscesses have been treated by subcutaneous injections of vaccines and serums, an explanation of which terms will be found under the respective headings.

Absinthism **9**

Though in most respects the excessive consumption of absinthe is followed by the same symptoms of alcoholism as the abuse of any kind of alcoholic drink, absinthism, which is so prevalent in Paris, and of which a few cases are occasionally reported from the Soho quarter in London, presents one or two characteristic features. It induces convulsions at a fairly early stage, and hallucinations without the other symptoms of delirium tremens, such as trembling and sleeplessness. The treatment is

the same which is adopted against inebriety generally and will be found discussed under the heading "Alcoholism."

Acetonaemia (Acidosis) 10

Presence of acetone and other organic acids in the blood, as evidenced by their presence in large quantities in the urine. A symptom of diabetes, denoting a highly active stage of the disease. The condition is characterised by a peculiar odour of burnt flavour emanating from the patient. It is frequently a forerunner of diabetic coma.

Acidity,, and Alkalinity 11

In medicine, this term does not mean so much that a fluid or an organ has an acid reaction—or a sour taste—as that there is in connection with it an excess of acid or that acidity is present when its very opposite—namely alkalinity—should exist. Chemically, a substance is said to be acid when it causes a piece of litmus paper to change from blue to red, and alkaline when it turns it from red to blue. Hydrochloric acid and nitric acid are examples of acids; the best known alkalis are sodium and potassium. The latter are also called antacids.

Acidity (of Stomach) 12

This is a form of dyspepsia or indigestion of which the principal symptom is the rising of sour wind or liquid from the stomach into the mouth about an hour or two after a meal. The eructations are accompanied by a burning pain in the region of the stomach which may last a couple of hours. The cause lies in an overproduction or hydrochloric acid, which is one of the constituent parts of the gastric juice. As a rule this is the consequence of a diet consisting largely of starchy food, such as bread, pastry, potatoes, rice, oatmeal, peas, etc. Sugar also aggravates acidity of the stomach. To relieve acidity, attention must be paid to the diet, and the food mentioned avoided or taken sparingly.

As for medicines, the alkaline carbonates answer best, and a powder or tabloid of sodium bicarbonate of five grains, or one of bismuth carbonate of five grains, taken about an hour after food, reduces the acidity considerably. (*See also under* "Indigestion.")

Acne (Acne Vulgaris) 13—18

This is the most frequent skin disease in young adults, and is often mistaken for eczema and other affections of a more serious nature. It consists of a number of pimples which keep coming and going—some leaving small scars behind, not unlike those of smallpox—chiefly on the face, forehead, back, shoulders, and chest. Sometimes they remain limited to the nose only, thus giving rise to the condition known as "red nose," which is often a source of much worry and annoyance.

This "red nose" in young people must not be mixed up with the "red nose" in older men and women, who owe the disfigurement in the vast majority of cases to the abuse of alcohol. In the centre of the acne pimple there is generally to be seen a black spot—hence the name "blackheads," by which acne is popularly known—which is nothing but a particle of dirt or dust; round it there is a little swelling containing sebum, or accumulated secretion from the sebaceous glands—in other words, the

oily substance emanating from the skin so that it may preserve its smooth and soft character.

14. Under ordinary circumstances this sebum makes its way through the pores, giving to the face its shining appearance; but when the pores are obstructed, the secretion remains behind and forms acne pimples. The worm-like plug squeezed out of such a pimple is the very sebum we speak of. These plugs are looked upon by some people as real parasites thriving on the tissues round which they are implanted, and even medical men thought so at one time, and called them by the Latin name of "comedones," which means "fellow-feeders." Very often the acne pimples become inflamed—in fact they are called "acne" when inflamed—and they even form "pus" or matter, thus becoming small abscesses. Some of them do not come to a head and remain so-called "blind boils," which are rather painful until they get absorbed after some little time.

15. Acne is more common in anæmic young people with somewhat slow circulation, and for that reason is often seen along with other symptoms of slow circulation, such as cold hands and feet, chilblains, a pale complexion, and so on. It seldom is seen after the age of thirty, the usual age at which it is most prevalent being about eighteen or twenty. In young men it generally begins when the beard is about to commence to grow, and as a rule it subsides when the beard is in full growth. I have long been of the opinion that smoking contributes to the production of acne in boys and young adults, and many other medical men hold the same view. Working under certain conditions also seems to favour acne, for instance, when exposed to dirt and grease. It may be mentioned, as an example, that those engaged in the coal-tar industry are very much subject to acne of a rather severe form. It is also worth remarking that acne is more prevalent in cold weather.

16. The treatment of acne requires great perseverance and patience. Much can be done to prevent the eruption by washing the face night and morning with soap and water and drying with a rough towel. Soaps with a sand-like action, such as that known as "Monkey Brand," answer very well. This alone may be sufficient to keep the pores open and to prevent the formation of pimples. Where the latter do form, and "comedones" result, they should be pressed out by means of a watch-key or special "acne-extractors." If acne proper ensues, the pimples may continue to be washed and rubbed as mentioned, or sulphur ointment should be applied overnight, washing it off next morning with lukewarm oatmeal water. It is also advisable to keep the bowels open—if confined—by a daily morning dose of Glauber's or Epsom salt.

17. As the diet plays an important part in the causation of acne, it is necessary to be careful in this respect as well. Fats and greasy articles should be eaten sparingly. Sweets and starches are permissible in moderation only. Some people seem to be very susceptible to eggs as a cause of crops of acne pimples, and it is as well to bear this in mind. Tea and coffee should be taken weak and in small amounts only.

As regards drugs, calcium sulphide may be taken with benefit in very chronic cases. The dose is from one-sixth to half-grain in tabloid form or

as a powder, two or three times daily after meals with a little water. In less severe cases, the following iron mixture is useful, especially as it combats constipation at the same time: Iron sulphate 16 grains, magnesium sulphate one ounce, dilute sulphuric acid one drachm, peppermint water to make up four ounces. One tablespoonful to be taken in water before breakfast, preferably through a straw to prevent blackening of the teeth.

18. For local application, if sulphur ointment does not effect an improvement soon, ichthyol soap, five per cent. strong may be used along with it or the following lotion should be given a good trial: Sulphate of zinc and sulpho carbolate of potassium one drachm of each, rose-water to make up four ounces. Where the acne is accompanied by an oily skin a lotion made up of one drachm precipitated sulphur, four drachms of ether and three-and-a-half ounces alcohol, is very serviceable. It should be used once or possibly twice daily.

There are cases of acne which seem to yield to almost no treatment whatever, and for these some doctors are now trying various vaccines prepared from bacteria or serums derived from the blood of animals rendered immune against bacterial diseases, and which they apply by means of injections into the skin. Others employ electricity, the X-rays, or other similar measures. It may be said, however, that cases requiring this sort of treatment are on the whole rare, and that even very chronic forms of acne can be cured in the end by attention to hygienic requirements, as laid down in the above remarks, aided by the use of the simple remedies recommended.

Acne (Rosacea) **19—20**

Though a form of acne—inasmuch as it also originates in the sebaceous glands—acne rosacea, or "red nose," as it is commonly called, differs in many respects from ordinary acne. In the first place it is seldom seen in people on the younger side of forty. Then it is more like a butterfly inflammation, with the nose forming the centre. Upon the organ itself there are numerous little pimples and pustules which are colloquially spoken of as "grog-blossoms."

The blood vessels are seen to be dilated and the skin becomes thicker. There is also some tingling and smarting. In advanced cases the nose looks like a large tumour made up of little lobules. To this has been given the name of "rhinophyma." Others call it "hammer-nose"—a very apt designation. The inflammation is like a big patch spreading over a large portion of the face.

Acne rosacea is seen more in men than in women, the causation lying mostly, *though not always*, in abuse of alcohol. Sometimes it is the product of chronic indigestion.

20. The flushes of the face from which some people suffer, especially at certain periods of the day, for instance, after meals, are a slight form of acne rosacea, and should be taken as a hint that there is something wrong requiring correction. The treatment lies therefore chiefly in strict attention to matters of diet, abstention from alcohol or tea, as the case may be, and avoidance of constipation. As to the nasal deformity, it generally becomes necessary to make incisions with a knife, or to remove portions of it, so that the aid of a surgeon must be sought sooner

or later. In earlier stages vigorous application of sulphur ointment may arrest the progress. Small quantities of it should be rubbed in every night and washed off in the morning with lukewarm oatmeal-water. During the day this may be supplemented, if convenient, by smearing over the inflamed places some glycerine of borax or covering them with strips of linen soaked in calamine lotion.

On the assumption that acne rosacea is the result of bacterial invasion—indeed an acne bacillus has been described as the causative agent of all forms of acne—some doctors treat the deformity by subcutaneous injections of vaccines, but the results have hardly been satisfactory enough to justify the general adoption of this method of treatment as far as acne rosacea is concerned.

Acrodynia **21**

An inflammation of the skin affecting chiefly the palms and soles, accompanied by tingling and smarting sensations or severe pain. Sometimes the upper layers of the skin are shed in large pieces. The disease is rare, but it occurs occasionally in a sort of epidemic form. The treatment is the same as that of other local inflammations.

Acromegaly **22**

A curious disease, of which the most striking feature is an extraordinary enlargement of the bones, chiefly of the hands and feet, the fingers and toes looking like so many sausages. The face, at the same time, assumes vast proportions, especially in the lower jaw, so that it has been compared to an egg with the large end downwards. There are also other changes in different parts of the body. The disease is rare, it affects more women than men, and the treatment is unsatisfactory.

In some cases, a slight improvement has been obtained by the administration of thyroid extract or of bone marrow. In others there has been observed a spontaneous arrest in the progress of the disease.

Recent researches attribute the cause of acromegaly to enlargement or disease of the pituitary body—a small vascular structure situated underneath, and forming part of, the brain. Cases of acromegaly have been reported as cured by surgical operations affecting this organ. (*See also under* "Thyroid Gland, Diseases of.")

Actinic Rays **23**

This term is now much used in reference to treatment by light and other forms of radiation. It means those rays of the spectrum which are capable of producing a chemical change or reaction. They are found in the violet and ultra-violet parts.

Actinomycosis **24**

Actinomycosis is a chronic infectious disease affecting chiefly horned cattle and swine—in which it is known by the name of "woody-tongue"—and attacking also human beings who come into contact with them. The mode of infection is not quite clear. The cause of the disease is a vegetable parasite called "actinomyces" or ray-fungus, and the symptoms consist of numerous abscesses and tumours in various parts of the body. It is a very serious disease, for which medical and surgical treatment is required from the very commencement.

Potassium iodide in doses of 20 grains or more daily in a little water

is regarded as a sort of specific. Externally, it is usual to employ irrigations of corrosive sublimate solution, 1 in 1,000 strong.

Vaccine treatment in addition to potassium iodide has been followed by good results in cases reported recently from America. In one case vaccine treatment alone effected a satisfactory and rapid cure.

Acupressure 25

A method of treating ruptured varicose veins or wounds on the scalp by the compression of the blood vessels by means of needles inserted into the tissues on either side of the seat of hæmorrhage. One frequently can arrest serious bleeding from a large artery in this manner when other means fail or are not at hand.

Acupuncture 26

This is a method of treating painful illnesses, such as lumbago, sciatica, and other neuralgias, by the introduction of fine, round needles into the skin over the affected places to a varying depth. It is not in so much use now as formerly, though practitioners who employ it obtain satisfactory results. Should anyone feel tempted to have recourse to this heroic remedy, he should in all instances boil the needles first, so as to prevent bacterial infection. The needles may remain in their position for about an hour or two.

The treatment is said to be practised in America is cases of enlargement of the spleen through malaria, also as a cure of rupture. A form of acupuncture is used in the joining together of ununited fragments of a broken bone. In aneurysm also, acupuncture is one of the recognised methods of treatment.

Quite recently it has been suggested to treat by acupuncture obstinate cases of rheumatoid arthritis, and to paint immediately over the area treated a mixture of croton oil, cantharidin, acetic acid and almond oil. The procedure causes an eruption of pustules of various sizes.

Acute, and Chronic 27

We speak of acute diseases—as distinguished from chronic—when they run a rapid course, and the symptoms are more or less sudden. Pneumonia, for instance, is an acute disease, consumption a chronic one. Similarly we speak of acute and chronic symptoms. The word acute when used in connection with pain means that the latter is severe. "Acute vision" denotes normal eyesight.

Addison's Disease 28

The chief symptom of this disease is a peculiar discoloration of the skin, which assumes a bronze-like hue. The patient is, at the same time, weak and inclined to fainting fits. The causation is supposed to lie in tuberculosis of the suprarenal glands—two small organs situated above the kidneys, the function of which is one of the remaining unelucidated mysteries in the domain of physiology. (*See under* "Thyroid Glands, Diseases of.") Addison's disease is very chronic as a rule, sometimes lasting for as long as ten years. Occasionally it lasts a few days only. People suffering from it who are in comfortable circumstances have a better chance of living longer. The treatment is unsatisfactory. It consists chiefly of tonics containing iron, arsenic, and strychnine, stimulants, and attention to the general health. Large doses of glycerine appear to

have been beneficial in some cases. In others supra-renal extract either internally in the form of powder or tablets, or hypodermically in solution keep the symptoms in check. On the theory that the disease is a form of tuberculosis, some cases have been treated by tuberculin and other anti-tuberculosis remedies, including cod-liver oil, with more or less success. Other remedies recently suggested are extract of the pituitary body, tyramine (an important constituent of watery extracts of ergot) and several others.

Adenoids (Adenoid Vegetations) 29—30

Why so many people, especially children, should suffer from adenoids, it is difficult to say. There may be something in the suggestion that the "dummy teat"—that unfailing friend of harassed mothers—has something to do with it. On the other hand, it is freely asserted that heredity plays an important part.

There is some connection between adenoids and rheumatism in children which suggests that dampness and other climatic considerations cannot be ignored in this respect. Delicate children, with weak circulation, are much more liable to develop adenoids than those who are generally in good health.

30. Adenoids or adenoid growths or vegetations, are little fleshy swellings at the back of the nose which interfere with the breathing process, necessitating breathing through the mouth. The result is a vacant, stupid expression of the face, a nasal twang or inability to pronounce certain consonants like *m* and *n*, which sound more like *b* and *d*, and marked snoring when asleep. It is also a common thing for children with adenoids to be subject to bed-wetting, nightmares, and disturbed sleep. They are also backward in other respects, catch cold easily, and are easy victims of infectious children's diseases, as well as of tuberculosis. Deafness, or discharge from the ears, are frequent complications. The best treatment is to remove the growth by surgical means, and the surgeon's disinfected finger nails is sometimes the only instrument needed. In older children and young persons, however, it is frequently sufficient to give the patients cod-liver oil, and to syringe the nostrils with salt and water or a solution of boracic acid—a teaspoonful to a pint of warm water. A stay at the seaside is also known to effect wonders in children with adenoids.

Adenoids go together as a rule with enlargement and chronic inflammation of the tonsils.

Agony 31

This expression, when used in a medical sense, means the painful struggle with death, though it is frequently employed to denote violent pain. Much doubt has been thrown upon the established notion that a dying patient in agony experiences pain, and evidence is accumulating that the struggle is more alarming to the onlooker than a source of suffering to the person concerned.

Agoraphobia 32

This is a rather frequent nervous affection, which consists in a dread of open spaces. The sufferer is afraid of crossing a street, a bridge, or square by himself. In some cases he is even unable to leave his house or room. It is not mere timidity or actual anxiety that some great

calamity will happen, but an indefinable awe which paralyses the thinking faculty. As a rule the condition is accompanied by other symptoms of a nervous temperament. The treatment is the same as that of neurasthenia in general.

In milder cases, especially where the agoraphobia is practically the only existent symptom of a derangement in the nervous functions, I have on several occasions suggested to the patient that he should always carry a walking stick or an umbrella, and I know of at least two cases in which the suggestion was adopted with good results.

Ainhum **33**

Travellers in tropical countries inhabited by negroes have described by the above name a disease which affects the toes, generally the little toe, and which ends in their spontaneous amputation. It is peculiar to the negro race, and its cause is unknown. The curious thing about it is that the patients seem to experience neither pain nor inconvenience.

Air **34**

Air is employed in medicine in asthma and other affections of the respiratory organs in the form of air-baths or inhalations, under ordinary pressure, condensed or rarefied. Change of air is frequently of great benefit in chronic illnesses and in convalescents. During the last few years French surgeons have introduced a method of treating pleurisy by the injection of air into the pleural cavity—the pleura being a double membrane which covers the lungs and there being a space between the two layers—thus establishing an artificial pneumo-thorax, a method practised now in this country, too.

Liquid air is now much used in medical practice as a local anæsthetic, for the cure of boils and carbuncles, in severe forms of lupus, in cancer of the skin, for the removal of birth-marks, nævi, moles, and other small cutaneous tumours, and generally like other cauterising agents.

Hot air forms the essence of Turkish baths which are a recognised method of treatment of rheumatic and other affections.

Air-beds are airtight rubber mattresses filled with air which take now the place of the more old-fashioned water-beds when a patient has to lie on his back for a long time at a stretch.

As to the importance of fresh air for the maintenance of good health, it is hardly necessary to say much, though this simple maxim is often sadly neglected. One should remember that a draught is less dangerous than a room in which the air is vitiated through the breathing of people and the burning of artificial light. A badly-ventilated room is the antechamber to the cemetery; a constantly open window a passport to long life.

Air can be the cause of serious mischief, as, for instance, in the rare cases when air bubbles enter an injured vein and are sucked into the blood circulation. Death results in a very few minutes. A mishap of this sort goes by the name of air embolism.

Air Passages, Diseases of **35**

We often speak of diseases of the air passages, and these include the respiratory organs, beginning with the nose and terminating in the lungs. The subject will be found discussed under various headings, such as

laryngitis, bronchitis, etc. (*See* index.)

Albinism **36**

Albinism, which means whiteness, is as a rule a congenital condition, though occasionally it appears in after-life. It manifests itself either in the form of total absence of colour in the skin, or in the shape of white hair or white patches in various parts of the body, including the pupil of the eye. Such people are called "albinos." Rats and mice are very much subject to a similar condition, many of them being quite white. Travellers on the east and west coasts of Africa tell us that albinism is quite common among the negroes of those regions. The cause of the abnormality lies in a deficiency or total absence of the natural pigment of the skin. Treatment is quite useless. Albinism is often hereditary.

A form of albinism has been described in connection with leprosy, the skin affected becoming perfectly white. (*See under* Leukodermia.)

Where the eyes show signs of more or less albinism it is advisable to wear dark glasses; otherwise there is much risk of inflammation.

Usually albinos are mentally weak and bodily ill-developed, though there are many exceptions to this rule.

Albuminuria **37—39**

So much misunderstanding exists on this subject that it is as well to say at once that albuminuria—or the presence of albumen (or albumin—the substance which constitutes the white of an egg) in the urine—is not ascertainable by merely looking at a specimen of urine. The way to tell whether there is albumen in the urine is to boil a small quantity of the latter in a test-tube. If the urine was quite clear previous to boiling and it becomes cloudy through the act of boiling, the addition of a few drops of nitric acid or acetic acid settles the matter. If the acid disperses the cloudiness there is no albumen; if the cloudiness remains the probability is very great that albumen is present. More detailed and technical tests, which cannot be described here, remove all doubt.

38. Albuminuria is the most constant sign of disease of the kidneys—known generally by the name of Bright's disease—and it is also a symptom of other conditions, including disease of the heart or lungs. But it happens fairly often that people, who are to all intents and purposes in good health, discover accidentally, as, for instance, when being medically examined for life insurance or admission into a friendly society, that their urine contains albumen, and that, for this reason, they are not regarded as "good lives." This kind of albuminuria is known as functional or physiological albuminuria if no other symptoms of disease are present, and may be due to temporary causes, such as a meal consisting largely of eggs, severe muscular effort, mental worry, and so on. Under such circumstances, one examination of the urine must not be taken as decisive, and another should be arranged for as soon as possible. In most cases the result is favourable in the end; but if repeated examination of the urine reveals the presence of albumen every time, the matter is not without a serious aspect, and medical advice should be sought. In these days when nearly everybody has "to pass the doctor" for some reason or other, functional albuminuria plays a very

important part. Prolonged albuminuria is capable of giving rise to anæmia and other serious illnesses. Young men with even slight traces of albuminuria are warned against going on service to tropical or unhealthy places, experience showing that they soon fall victims to the altered surroundings.

39. The treatment of albuminuria depends on the cause. That of functional albuminuria is principally a matter of diet; meat, eggs, vegetables, and alcohol being best avoided or reduced considerably. Iron tonics are very useful.

Alcohol and Alcoholism 40—44

I must preface my remarks on this subject by dispelling a popular belief that alcohol enters into the composition of spirits only. Doctors are constantly told by patients who are regular consumers of beer or wine that they never touch a drop of alcohol. Now, alcohol forms part of every intoxicating drink, and, strange as it may seem, also of many so-called temperance drinks. It is the alcohol which causes the intoxication, or, where the latter is absent, the stimulation. Of course, the percentage of alcohol differs in various beverages, and the higher that percentage, the more intoxicating the beverage is. The following list giving in percentage of alcohol a comparison between the most popular drinks will be read with interest. In the case of some of them the percentage of alcohol is, as a rule, considerably less on account of dilution with water by the sellers.

Rum	contains	60 to 70%	alcohol
Whisky	,,	50 to 60%	,,
Brandy	,,	50 to 60%	,,
Gin	contains	45 to 60%	alcohol.
Port Wine	,,	14 to 18%	,,
Sherry	,,	14 to 18%	,,
Claret	,,	8 to 12%	,,
Burgundy	,,	8 to 14%	,,
Moselle	,,	8 to 12%	,,
Hock	,,	7 to 16%	,,
Champagne	,,	6 to 13%	,,
English beer	,,	4 to 8%	,,
German beer	,,	3 to 5%	,,
Stout	,,	4 to 8%	,,
Lager beer	,,	2 to 4%	,,
Cider	,,	2 to 8%	,,
Ginger beer	,,	1 to 3%	,,
Liqueurs	contain	30 to 50%	,,

41. A glance at above list supplies at once the explanation why spirits produce intoxication more quickly and effectively than wine, and wine more than beer. It also shows that it is possible to get drunk on cider or ginger beer, provided one drinks enough of it. By diluting any given drink with water the percentage of alcohol is proportionately reduced, but the effect on the system is precisely the same whether the drink is consumed diluted or not. This observation does not apply to the swallowing of raw spirit, which acts as an irritant poison on the mucous membrane of the gullet and stomach. It is also necessary to mention here that intoxication is not hastened by the consumption of several kinds of drink at one sitting, as so many people believe. The cause of the intoxication lies in the fact that some of the drinks contain more alcohol than the others, thus increasing proportionately the total amount of alcohol consumed.

42. By acute alcoholism we do not mean a state of drunkenness or intoxication, such as we observe every day, but actual alcoholic poisoning, which may end fatally in a few

minutes or hours after a rapid imbibition of a large quantity of spirit, especially in those unaccustomed to it. The symptoms are unconsciousness, fixed pupils, slow pulse, cold and clammy skin, heavy breathing, and sometimes delirium and convulsions. Sickness and vomiting are favourable signs. The treatment of a case of this description consists of giving an emetic, such as warm water and mustard, or, if possible, in emptying the stomach by means of the stomach pump, in applying cold water to the head and injecting cold water into the ears, and in the administration of smelling salts if they are at hand. Medical aid must be summoned immediately, as stronger measures may be called for. Until the doctor arrives everything should be done to keep the patient awake or to try and rouse him if he is fully unconscious.

43. Another form of acute alcoholism is that known as delirium tremens or D.T. This comes on as a rule after a long drinking bout, sometimes, curiously enough, a few days after the patient has ceased to drink. The characteristic symptoms are sleeplessness, trembling and hallucinations of all kinds. Among the latter the well-known delusion that there are animals and insects about is almost always present. Frequently there are suicidal or homicidal tendencies. The outlook is very bad. Many such patients die within three or four days, others develop pneumonia and die from it; some who have strong constitutions recover, but, as often as not, they succumb in a second attack shortly afterwards. A favourable indication is when the patient falls into a normal sleep. Delirium tremens seldom occurs in those who are not habitual drinkers. It is very often brought about in drunkards during a spell of sobriety by some shock or accident; in others, it forms a dangerous complication in diseases like pneumonia or erysipelas. In those who recover, the hallucinations may continue for some time although the other symptoms have disappeared. Patients suffering from delirium tremens require not only skilful medical attendance, but the best obtainable nursing and supervision. Whenever practicable, they should be sent to a suitable institution.

44. If this cannot be done, the patient should be kept in bed at first, but afterwards it is advisable to take him out into the fresh air, and to allow a reasonable amount of exercise. The sleeplessness being the most distressing of the symptoms, it is necessary to combat it by the administration of drugs, and of those which have recently come into use in the place of the old-fashioned chloral hydrate—though the latter is still a favourite with many doctors, who prescribe it either by itself or in combination with potassium bromide—barbitone may be relied upon to give good results provided it is given in non-poisonous doses (5 to 10 grains). Paraldehyde is also a good hypnotic in delirium tremens but it must be administered in large quantities—from two to four or five teaspoonfuls—if it to have any appreciable effect. It can be given in the form of an enema if the patient cannot be made to swallow.

Sometimes victims of delirium tremens get over the acute symptoms, especially the usual hallucinations, but develop instead imaginary noises, complaining that they are always "hearing voices" or musical instru-

ments. This is frequently a sign of coming insanity.

Alcoholism, Chronic **45—48**

This is a combination of the consequences resulting from long-continued and excessive consumption of intoxicating liquor. It shows itself chiefly in an affection of the nervous system. There is more or less sleeplessness, trembling, irritability, a sinking feeling necessitating frequent recourse to alcoholic stimulation, and inability to concentrate one's attention to business matters unless under the influence of alcohol. The patient complains of headache, dizziness, impaired eyesight, floating specks before the eyes, sickness, especially in the morning, want of appetite, and a host of other symptoms. His tongue is furred and dirty, he has a bad taste in the mouth, the eyes are red, the face is tinged with yellow. Then the nose begins to assume the well-known red and thickened appearance. At the same time the liver begins to swell and the heart shows signs of weakness. The kidneys show signs of deterioration by the presence of albumen in the urine, dropsy sets in and hardly an organ in the body escapes the general break-up. Should the patient fall ill from any acute disease, for instance, pneumonia, the chances are all against him. He is sure to succumb very quickly. This is by no means an exaggerated picture; on the contrary, much more could be said.

46. To treat chronic alcoholism without withdrawing from the patient immediately and entirely every drop of alcohol is like trying to put out a fire whilst fresh fuel is added to it of a most inflammable character. The practice advocated in some quarters that the abstention should be enforced by stages is necessary only in a very small number of cases—if at all. That the patients prefer the gradual to the sudden withdrawal is but natural. They are in the grip of the obsession, and resistance to the craving is torture to them. But yielding to it, even in a diminished degree, can only lessen what resisting power is left to them, and a cure becomes impossible. For this reason, alcoholism cannot be treated successfully elsewhere than at strictly conducted institutions, and to attempt to do so at the patient's home is but to court failure and to dig for the sufferer an early grave. Chronic alcoholics are not to be trusted in spite of their sincere desire to be cured.

The treatment of the various symptoms of chronic alcoholism such as dyspepsia, insomnia, nervousness, dropsy, etc., will be found under the respective headings, but I might say here a word or two on the measures to be adopted with a view to curing the craving for alcoholic drink, usually spoken of as dipsomania or inebriety.

47. Dipsomania is really a form of moral insanity and need not necessarily be accompanied by symptoms of bodily illness. It is frequently hereditary or present in people whose parents were either drunkards or in some other way mentally deranged, but it may be acquired through over-indulgence in stimulating drink for the purpose of keeping pace with the requirements of modern exacting conditions.

48. As already mentioned, the best plan to overcome dipsomania is to seek the shelter and systematic treatment of some suitable institution. In exceptional cases, however, the

individual affected musters sufficient self-control to enable him to conquer the morbid craving, and for such persons tonics of iron, arsenic or strychnine are somewhat helpful. One such mixture, for instance, can be made up as follows: Strychnine ¼ grain, tincture of perchloride of iron 80 minims, infusion of quassia 8 ounces. To be taken in tablespoonful doses two or three times daily. The first ingredient being a powerful poison, the greatest caution is demanded, and it is preferable to obtain a doctor's prescription. But I may say that I have in my practice now and then had fairly satisfactory results from this mixture without the strychnine, probably because of its bitter taste. Indeed, infusion of quassia alone may be given a trial, and I have seen some good from the advice given to chew a piece of quassia each time the dipsomaniac experiences a craving for alcoholic drink.

Sometimes one succeeds in eradicating the vice by the administration of cayenne pepper or ipecacuanha given with tea, coffee or other similar beverages, though one must not believe the statements that this can be done without the victim's knowledge. The various "home-cures," too, have their successes and their failures—mostly the latter.

Of recent years hypnotism has been employed in the treatment of dipsomania, on the whole with good results, but chiefly of a temporary nature. From the Continent comes the information that success has attended the method of treatment by substituting sugar for alcohol. The patient is given as much sugar in the form of sweets, sweet fruit, pastries and chocolate, etc., as his digestion allows him to consume.

In mild cases one may give a trial to hot baths—or preferably radiant heat baths—followed by massage and accompanied by abundant feeding.

Alcoholism, Prevention of 49—51

There is one very important question in connection with the subject of alcohol which cannot be ignored in a book like the present, and that is the question of temperance versus total abstention.

People often ask what they are to drink, whether alcohol is injurious in all cases and under all circumstances, how much alcohol may be taken without harm to the health of the mind or of the body, and other similar questions. It is obviously impossible to answer them in a manner satisfactory to everybody. The advocate of total abstention regards the advocate of moderate drinking as a disciple of the devil, and the latter returns the compliment by calling the former a bigot and fanatic. Yet they are both right and both wrong. There are, doubtless, many people who interpret the word "moderation" in their own way, which generally means the wrong way. They call a "moderate allowance" what appears to the reasonable man a most excessive quantity, and the sequel is pronounced chronic alcoholism. For such people the best course to adopt is to practise total abstention thereby avoiding all temptation to overstep the bounds of prudence. On the other hand there are vast numbers of individuals who possess the power of self-control to a sufficient degree to know how far they may go in the matter of alcohol as in other matters which confront them in their daily life. They are the very people who in this age of stress and bustle are in need of a stimulant and

who in the absence of alcohol would probably have recourse to other and more dangerous remedies. To them all I can say is: Use your discretion wisely.

50. As a guide, but only as a guide, seeing that all men are not alike, and that what may be just sufficient to one may be excess to another, authorities on the subject agree that the quantity of alcohol permissible in the course of twenty-four hours to a healthy adult should not, on an average, exceed from one to two ounces.

In my opinion this is not only a liberal but generous allowance, bearing in mind the circumstance that alcohol has accumulative properties, that is to say the effects of one dose have generally not disappeared by the time a second dose is taken. It has been calculated that it takes about three days for a moderate amount of alcohol to lose its influence entirely.

51. So that the reader may know what an ounce of alcohol is represented by in the form of ordinary beverages, the following list is appended; the quantities are approximate.

1oz. alcohol in about 1½oz. rum.
,, ,, ,, 2oz. whisky.
,, ,, ,, 2oz. brandy.
,, ,, ,, 2¼oz. gin.
,, ,, ,, 6oz. port.
,, ,, ,, 10oz. claret.
,, ,, ,, 20oz. strong beer.
,, ,, ,, 40oz. lager beer.
,, ,, ,, 80oz. ginger beer.

That these quantities are often exceeded by people apparently in the best of health cannot be denied, but on can only say that here, like in everything else, the exception proves the rule. Chronic alcoholism would certainly be rarer if the vast mass of our population would regard this allowance as sufficient.

Alimentary Canal **52**

The alimentary canal, or alimentary duct, or alimentary system, includes the organs of digestion from the mouth to the anus. It consists of mouth and pharyngeal cavity, œsophagus or gullet, stomach, intestines, liver and other glands.

Alkaloids **53**

Compounds containing nitrogen and derived from plants. Many of them are powerful poisons. The best known alkaloids are morphia, which is derived from opium; strychnine, which is derived from nux vomica; atrophine, which is derived from belladonna; quinine, which is derived from cinchona bark; and nicotine, which is derived from tobacco.

Alveolar Abscess **54**

This term means an abscess which proceeds from the jaw in consequence of a diseased tooth. The abscess may form on the gum, when it is known as a gum-boil, and is easily opened, or round the fang of the tooth, when it may cause a deal of mischief and necessitate the extraction of the tooth so that the matter may be liberated. If this is not done, the abscess may burrow from under the jaw, finding an opening through he cheek. The symptoms of alveolar abscess are severe throbbing pain, a deep-seated swelling, and a swollen face and eyelid. The sooner the dentist is visited, the better. In the meantime hot fomentations and bread-poultices inside the mouth greatly relieve the agonising pain. (*See also under* "Pyorrhœa alveolaris.")

Ambulance **55**

Ambulances are obtainable at every police station and should be requisitioned for the removal of all accidents and cases of serious illness, except where such complications as hæmorrhage render every fraction of a moment precious. Even then it is safer to prepare an emergency-stretcher out of a blanket and a couple of poles or long sticks, or by removing a door from its hinges, than to place the patient in a cab. Most local authorities are now in possession of ambulances which can be telephoned for from the nearest call-office.

The term "ambulance" is also used very much in connection with what are known as "ambulance classes." Their object is to teach how to apply first aid in cases of sudden illness or in accidents. There are many societies which encourage the formation of such ambulance classes. The best known is perhaps the St. John Ambulance Association, the headquarters of which are at St. John's Gate, Clerkenwell, London. An inquiry addressed to the Secretary will bring all the desired information.

Amputation **56**

Though amputation is usually performed by the knife, there are also other means of removing a limb or some projecting part of the body, for instance, by ligaturing, cauterisation, etc. Amputation may also be effected spontaneously by gangrene or other forms of disease, as for instance, in "Ainhum."

Amyloid Disease **57**

Amyloid disease or amyloid degeneration, in which the organs, especially the blood vessels, undergo certain chemical changes by which they assume starch-like qualities, is a frequent result of prolonged suppuration or discharge from an abscess in any part of the body. Amyloid disease of the kidneys is one of the forms of Bright's disease.

Anæmia **58—62**

Anæmia is one of the most frequent complaints, particularly in young girls, though it is by no means unknown in children, young men and older women. It denotes a condition of poverty of the blood and that poverty may be one of quality or one of quantity. The causes of anæmia are many and multifarious, the commonest being insufficiency of nourishment, fresh air, and sunshine, want of exercise, prolonged constipation (generally due to a sense of false modesty), rapid growth, or chronic loss of blood from some other cause, for instance, nose bleeding, ulcer of stomach, etc., excessive work with insufficient rest, and so on. Then there are a group of cases of anæmia which are due to disease of the heart or lungs, to chronic metal poisoning (by lead or mercury in plumbers, painters or mirror-makers), or to other chronic illnesses, like Bright's disease, chronic alveolar abscess, intestinal worms, rickets, leucorrhœa, or cancer.

This form of anæmia is called secondary.

59. The symptoms or accompaniments of anæmia are familiar to everybody; Paleness of the face, lips and gums, and of the skin generally, pearly-blue colour of the white of the eye, cold hands and feet, swollen ankles, chilblains, general weakness, palpitation, a poor appetite, headache, noises in the ears, shortness of breath, nose-bleeding, indigestion,

constipation, leucorrhœa — all or most of these symptoms and many others are present in nearly every anæmic patient. The same symptoms are also present in chlorosis—or green sickness—which is only a form of anæmia, except that the skin instead of being pale is more of a yellowish-grey colour with a tendency to a sickly green. Many chlorotic girls present also a characteristic feature with regard to their appetite which assumes unnatural proclivities; they seem to enjoy eating the most indigestible or even impossible food. This symptom is known as pica chlorotica.

In many anæmic and chlorotic girls the stomach become ulcerated, giving rise to most alarming hæmorrhages, frequently with fatal results.

There is another form of anæmia which is generally seen in middle-aged persons of either sex and which unaccompanied by any organic disease seems to go from bad to worse, and to end in death. This form is known as pernicious anæmia. Various causes are mentioned in connection with it, from parasites in the blood to worry and general ill-health—which means that the real cause is unknown.

When a drop of blood from an anæmic patient is examined under the microscope it is found to contain considerably less so-called "red blood corpuscles" than normal blood, the reduction in pernicious anæmia being as much as from four or five million per cubic millimetre to one million or less. This reduction is not so great in the less serious forms of anæmia, but as the red blood corpuscles perform the process of supplying the various parts of the body with the oxygen they need, the diminution in their number accounts for the symptoms of general ill-health.

60. From what has been said it is obvious that the treatment of anæmia consists in the removal of the cause which produced it. Unfortunately, this is not always possible. It is, for instance, absurd to advise a poor working girl who has to toil from early morning to late at night so that she may keep body and soul together, to live under better conditions than she is doing, and to indulge in dietetic luxuries. Still, much can be done in inculcating among the working classes the importance of ventilation and of reasonable exercise in the open air. I have, for instance, in many cases been able to improve the condition of anæmic working-women by such a simple thing as recommending them to work as near an open window as possible, and to walk the whole or part of the way to and from their homes instead of riding in stuffy trains or tram-cars. Again, not too much stress can be laid on the importance of having a daily action of the bowels. In very many cases nothing more is wanted than response to the call of nature, a response which is frequently ignored through false modesty or laziness. It is interesting in this connection to mention that a very celebrated physician, the late Sir Andrew Clarke, was of the opinion that constipation is the one and only cause of anæmia.

Where there is some other probable or obvious cause of the anæmia, such as a chronic alveolar abscess or hæmorrhage, it is imperative to have it removed or at any rate attended to without loss of time. An important element is sufficient sleep and rest in bed, especially in girls of the working class, and an abundance of plain nutritious food, chiefly milk and bread and butter.

61. In addition to hygienic measures, iron in some form or another is a necessary part of the treatment of anæmia. The well-known "Blaud's pill" is an excellent method of administering iron. It is now prepared also in tabloid form or in the form of palatinoids. These solid preparations have the advantage that they do not injure the teeth as liquid forms of iron are apt to do. But many people prefer for various reasons to trust to the old-fashioned "bottle of medicine" and for their benefit I give here a few prescriptions which will be found very useful. After each dose the teeth should be cleaned and rubbed dry.

1. Citrate of iron and quinine 60gr., tincture of orange 6dr., cinnamon water to 6oz.; one tablespoonful three times a day after meals. 2. Fowler's solution 24m.; tincture of perchloride of iron 60m.; infusion of quassia to 6oz.; one tablespoonful three times a day after food. 3. Citrate of iron and ammonia 60gr.,; glycerophosphate of iron 36gr.; chloroform water to 6oz.; one tablespoonful three times a day after food.

62. Of late a number of new remedies have been introduced for the treatment of anæmia, apart from the many more or less palatable forms of iron. I would like to mention specially hæmatogen, malto-hæmoglobin, lecithin, bone-marrow, blood-serum, and preparations of arsenic including salvarsan. The latter has proved useful in some cases of pernicious anæmia. The mineral water known as Levico, on account of the arsenic it contains, is much used now where iron is not easily borne. It is advisable to begin with the mild variety.

The best and cheapest aperient for anæmic girls is Epsom salts, to be used as, and if, required. As nearly every case of anæmia has its own peculiar features it is advisable to obtain medical advice as soon as possible, if the above directions are found insufficient. General rules as to treatment and diet are not always applicable and require changing in suitable cases and according to individual needs.

Anæsthesia **63**

This term denotes a condition of insensibility or loss of sensation which may be the result of disease or brought about by artificial means known as anæsthetics. When there is only absence of pain instead of entire loss of sensation we use the expression analgesia.

Artificial anæsthesia is usually induced for the purpose of rendering operations painless, and of keeping the patient still, but it is also resorted to for other reasons, such as determining whether a case is one of malingering or not, making it possible for the doctor to effect a thorough examination, and so on.

As a rule it is not advisable to induce artificial anæsthesia in persons with weak chests or in those who are chronic alcoholic subjects.

It is interesting to note that ether is regarded as a much safer anæsthetic than chloroform, but each of the two is preferable to the other under certain conditions. For instance, chloroform is preferable when the lungs are affected and ether when the heart is diseased.

The anæsthetic known as A.C.E. mixture consisting of one part alcohol, two parts chloroform, and three parts ether is administered through a mask in the same way as pure chloroform

and is supposed to be safer than either of its constituents used alone, when a prolonged state of unconsciousness is desired.

Anæsthesia and Anæsthetics 64

Although there have been, and there constantly are, accidents in connection with the administration of anæsthetics it is well that the public should not be unduly alarmed through them into refusing to be placed under an anæsthetic. The discovery of anæsthesia is one of the most beneficial inventions in the history of mankind, and one which has probably saved more lives than any other human agency. Roughly speaking, it has been calculated that a fatality occurs in one case out of ten thousand, so that the chances of an accident happening are very remote indeed. On the other hand, hundreds and thousands of operations would be impossible without an anæsthetic. It is also worth mentioning that the relative number of accidents through the administration of an anæsthetic is steadily diminishing on account of the inclusion of the subject of anæsthetics into the medical curriculum. Every medical student has now to undergo a proper and systematic course of instruction in the administration of anæsthetics, so that there are very few qualified doctors who are not thoroughly familiar with it, and, of course, the vast majority of cases, though not all, happen through some mistake on the part of the anæsthetist. One should certainly never consent to be anæsthetised by an unqualified man.

Anæsthesia, Methods of 65

By general anæsthesia we mean a loss of consciousness obtained by the inhalation of some vapour, such as ether, chloroform, or nitrous oxide. Local anæsthesia is the elimination of pain in the particular spot where an operation is about to take place. An example of the latter is seen in the injection of cocaine into the gum near where a tooth is to be extracted. Local anæsthesia is not so reliable as general anæthesia, especially in operations likely to last more than a few minutes, but recently a method of producing absence of pain has been introduced in the form of an injection of a pain-killing drug into the spinal marrow. The drug chiefly so employed is called stovain. This new method is spoken of as lumbar or spinal analgesia, and is considered as much more free from risks than general anæsthesia. Where it is advisable to avoid the latter, as for instance, in advanced disease of the lungs or of the heart, the spinal method is now much in use, and some surgeons employ it in addition to a general anæsthetic for the purpose of reducing the shock caused by severe operations.

Of recent years several other methods of inducing anæsthesia have come into vogue. Hypnotism is one of them, and for operations lasting a few minutes only it answers very well in the hands of some surgeons, though others will have none of it.

The suggestion has also been carried out to induce anæsthesia by means of the electric current, but so far this method has not received much encouragement.

Other methods include intra-tracheal insufflations of ether vapour and infusion anæsthesia by injecting ether or other drugs into a vein—generally the one at the bend of the elbow. Both of these are spoken of very highly, though they have not been

in use long enough to justify a definite opinion. It has now also become customary to combine with the use of a general anæsthetic subcutaneous injections of morphia and other alkaloids, especially where ether is administered in the place of chloroform.

All these and various others precautions have added considerably to the safety with which anæsthetics are now administered, but, of course, such questions as to whether an anæsthetic is advisable at all or which is preferable under given circumstances must be left entirely to the discretion of the operating surgeon who may have and probably has his own views on the subject.

Anaphylaxis **66**

This expression has come into use recently, and many valuable researches have been undertaken on the subject. It means induction of disease through chemical and other changes going on in the system, and is the exact opposite of prophylaxis, which means prevention of disease by similar methods. Anaphylaxis forms one of the side issues of that important branch of medical science which deals with immunity and immunisation from disease.

Anasarca **67**

That form of dropsy which appears under the skin in various parts of the body and which is recognised by the test of "pitting." When the finger is pressed into the swelling a depression or pit is produced which does not disappear for some little time. (*See under* Dropsy.)

Angina **68**

This term includes a number of conditions of the throat, the principal symptom of which is a sense of choking or suffocation. The commonest is that known as fibrinous angina, an inflammation of the tonsils, accompanied by the formation of a false membrane which resembles diphtheria, but it is not infectious and its symptoms are not so acute as in the latter disease. Simple sore throat is sometimes spoken of as acute or simple angina. Aphthous angina is that which accompanies the illness known as thrush. Ludwig's angina is characterised by the formation of abscesses under the jaws.

Angina Pectoris **69**

Angina pectoris, or suffocative breast-pang, is one of the most frequent causes of sudden death in people known to have weak hearts or to be subject to arteriosclerosis. Its symptoms are intense pain in the region of the heart, profuse sweating, extreme paleness, a slow and irregular action of the heart, and a sense of impending death by suffocation. The attacks come on with great suddenness, particularly through over-exertion or excitement, or even after an exceptionally heavy meal. Those who are fortunate to remain alive after the first seizure must therefore guard against these causes of subsequent attacks. Their medical advisers will also tell them to carry about with them small glass capsules containing from three to five drops of nitrate of amyl, a liquid which evaporates immediately it is liberated. The capsules are placed in the folds of a handkerchief; as soon as there is a sign that an attack of angina pectoris is coming on, the capsule is crushed and the vapour becomes available for inhalation. Should an attack last

longer than a few minutes, a doctor must be sent for, and he will very likely give the patient a hypodermic injection of morphia, or make him inhale some chloroform. Between the attacks it is usual to prescribe potassium iodide in 5 or 10 grain doses two or three times daily after food in a little water. It may also become necessary to administer some stimulant like brandy, or ether. Real or true angina pectoris is generally an occurrence in men of fifty years or upwards belonging to the better situated classes and who have always lived more well than wisely. A false form of angina pectoris is seen sometimes in neurasthenic persons—women as well as men—especially those who are overfond of tea, coffee, or tobacco smoking. The attacks come on at more or less frequent intervals, but though alarming are devoid of danger. Half or a teaspoonful of Hoffmann's anodyne (spirit of ether) will stop them.

Angioneurotic Œdema **70**

This affection known also as Quincke's disease is a form or urticaria or nettlerash, due to a neurosis of the blood vessels. It gives rise to localised swellings and inflammations of the skin and mucous membranes, which are apt to occur periodically after some dietetic indiscretion, being often accompanied — though not always—by other signs of indigestion. It is a disease possessing a distinctly hereditary or family character. The treatment of acute attacks consists in the application of weak lead lotion externally to the parts affected and protection from injury by covering with cotton wool. Where this is not sufficient, the following ointment will answer: Anæsthesin, one part; zinc oxide, one part; lime water, eight parts; oil of sweet almonds, sixteen parts. To prevent further attacks, attention must be paid to the diet. Salt water douches to the back followed by friction of the skin have a decidedly good effect. In addition, the patient may take a course of calcium lactate either in powder form —two or three grains three times daily after food, dissolved in plenty of water—or in the form of the liquor in tablespoonful doses with the same frequency.

Aniline, Poisoning by **71**

Workmen engaged in the many industries in which aniline—a by-product of coal-tar—is an important factor are subject to symptoms of anilism or chronic aniline poisoning, which include headache, giddiness, impaired eyesight, bronchitis, ulcers on the scrotum, and others. We also hear occasionally of people suffering from skin eruptions either because they work with aniline, as dyers or otherwise, or because they wear undergarments, chiefly stockings, or gloves, dyed with aniline containing colouring material. It is obvious that the way to remedy the trouble is to remove the cause. Acute cases of poisoning happen now and then, with fatal results.

Ankle, Diseases of **72**

Apart from dislocations, sprains and fractures at the ankle resulting from accidents, the ankle joint is subject to a number of diseases, tuberculosis especially being frequent in children. The diagnosis in the first stages is exceedingly difficult. The treatment is on the lines of tuberculosis generally, and incision of the joint often becomes a painful necessity.

Anodynes and Analgesics **73**

Drugs given internally or applied externally with the object of relieving pain. One includes among anodynes also such pain-relieving measures as hot fomentations, cold bandages, electricity, blood-letting, acupuncture, etc. The principal anodyne remedies are opium and its derivatives, including morphia; belladonna; hyoscyamus; cannabis indica; chloroform; camphor, etc. Nearly all anodynes are powerful poisons, and must be used with great caution. The following makes a useful anodyne liniment: Tincture of aconite 2 drachms, tincture of opium 4 drachms, tincture of arnica 1 ounce, chloroform 2 drachms, and soap liniment to make up to 4 ounces. For external application.

Anthrax **74**

Anthrax, called also malignant pustule of wool-sorter's disease (rag-picker's disease), because it is frequent in workers of this description, is really a very virulent form of carbuncle. It is an infectious disease, beginning with a pimple which becomes gradually a gangrenous mass. The general condition at the same time is one resembling an attack of typhoid fever. Death frequently occurs in less than twenty-four hours, but if surgical aid is immediately available so that the pustule can be incised and cauterised, the life of the patient may be saved. The disease is produced by the anthraw bacillus which generally proceeds from bodies of animals affected with splenic fever. Hence the risk incurred by butchers, tanners and others engaged in the trades concerned. It has been pointed out that if the germs of anthrax are swallowed, symptoms may arise similar to those of influenza.

There have been in recent years quite an alarming number of cases in various parts of England, although anthrax is one of the diseases which must be notified to the Home Office with a view to measures being taken against its spread, and workers likely to come into contact with infected hides, bristles, horse-hair, wool, etc., cannot be too careful as regards cleanliness and habits.

To some slight extent the dangerousness of anthrax has been reduced by the introduction of the anti-anthrax serum treatment of Sclavo, but this by no means justifies any laxity in the precautions to be taken against becoming infected.

Antipyrine, Poisoning by **75**

So many people are in the habit of taking regularly antipyrine and other similar drugs against headache, sleeplessness, neuralgia, and other complaints, that it is as well to give here a few words of warning. The habit, if indulged in to excess, produces, besides marked eruptions on the skin, such symptoms of poisoning as vomiting, indigestion, singing in the ears, drowsiness, swelled eyelids, and general mental and physical weakness. The urine is apt to become of a port-wine colour, and that as a rule caused a great deal of alarm. Abstention from the drug and a few 10-grain doses of citrate of potassium every two or three hours soon effect a cure.

Antiseptics **76**

The word "antiseptic" means opposed to sepsis or putrefaction, but it is used in many other senses as well, for instance as a preventive of

infection, as a destroyer of bad smells, and so on. We speak of antiseptics chiefly in connection with surgical operations. Before the introduction of antiseptics many people used to die after operations because the wounds became infected with microbes and the result was general blood poisoning. Now such a complication is extremely rare, because every precaution is taken by means of antiseptics to prevent the entrance of microbes into the operation wounds. The man to whom humanity owes this enormous boon was the late Lord Lister, the first medical man who received a British peerage in recognition of his services to the public. There are very many antiseptic preparations, and the number grows from day to day. The best known are carbolic acid, corrosive sublimate, called also perchloride of mercury, permanganate of potassium, iodoform, alcohol, boracic acid, and sulphate of zinc. The amount required to make suitable antiseptic lotions or powders of these different articles varies in accordance with prescribed rules.

Anti-Toxins **77—79**

A system of treatment has come into operation during the last twenty years or so the possibilities of which are greatly on the increase. Its principle is to some extent like that of vaccination, namely to produce substances called "anti-toxins"—which means opponents of poisons—out of the microbes which produce various diseases, and to inject them into the blood of the patient. The best known and most succesful instance is the anti-toxin used in the treatment of diphtheria, and that is prepared from the microbes to which diphtheria is due. It is well known that since diphtheria is being treated in this way the mortality from this dreadful disease has been reduced enormously—in some hospitals by more than two-thirds.

Anti-toxin treatment—or treatment by anti-toxic serum, as it is also called—has been adopted in other diseases as well, notably tetanus, or lock-jaw, but in none has it yet shown the same eminent results as in diphtheria. The "opsonin" treatment introduced by an English surgeon some years ago, is a variation of the anti-toxin method.

78. Within the last few years the anti-toxic treatment has been extended to a number of diseases not necessarily of an infectious character. Thus, for instance, many cases of anæmia and ulcer of the stomach are now treated by injections of various kinds of anti-toxic serum.

Since this form of treatment has become general it is sometimes noticed that it produces what is known as "serum sickness," the symptoms of which are an eruption on the skin, severe itching, pains in the joints, general lassitude and others. Asthmatic persons, particularly, seem to be subject to serum sickness, so that in their case the treatment must be administered with great caution.

79. A few words on how anti-toxic serum is prepared will probably interest some of my readers. An animal, generally a horse, is made immune against a certain disease, for instance diphtheria, by injecting into it diphtheria bacilli (or the poisons produced by them) in such a manner as not to endanger its life or health. After a given interval a quantity of blood is withdrawn from the animal, which is allowed to clot. The liquid portion is then removed by special

apparatuses and that forms the anti-toxic serum.

The dosage of anti-toxic serum is reckoned by units. An ordinary dose, say in a moderate case of diphtheria, consists of 2,000 units, but doses as large as 24,000 units or more are quite common when the disease is in an advanced stage. It is customary, or at any rate permissible, to inject into persons who have run the risk of infection, doses of 1,000 units for preventive purposes.

Anus, Diseases of **80**

The commonest diseases of that part of the body are: (1) Abnormalities and malformations, including fistula, which can only be remedied by operation; (2) warty growths of a non-serious character which are easily removable by excision; (3) irritability and itching which are sometimes exceedingly severe, especially at night-time when the sufferer begins to get warm in bed; (4) ulcers and fissures which often require operations; and (5) prolapse, or falling-out of the bowel.

The condition under (3) known as pruritus ani is very frequent indeed, and a few words on its treatment will be welcomed by many. In the first place, all condiments and stimulants, especially alcohol in any shape or form, must be avoided. Secondly, the bowels must be kept regularly open, and the part should be washed with a damp cloth after each evacuation. No toilet paper to be used. Thirdly, every friction and irritation by the clothes must be prevented. As to local soothing applications, the following are all useful: Pieces of cotton wool soaked in oxide of zinc lotion; suppositories of cocaine, ¼ or ½-grain strength; suppositories of belladonna of equal strength; suppositories of opium, 1 or 2-grain strength; glycerine of carbolic acid. Milder cases are generally relieved by means of the first-named remedy; more severe ones require one or more of the others, or the following ointment should be given a trial: creosote 1 drachm, camphor 1 drachm, vaseline 2oz. If they bring no improvement, the pain or itching is due to a persistent ulcer, or fissure, and surgical interference is necessary. Sometimes the itching persists even after the operation, when the cause lies in some diseased condition of the blood or of the nervous system. For these cases urotropin in 5 or 10 grain doses, three times daily, is to be recommended, especially if the itching is part of an existing diabetes.

Not rarely the severe itching in the anus is due to the presence of worms, in which case the appropriate treatment must be adopted.

Cases have been reported in which an almost instantaneous cure has been achieved by bathing in the open sea, and others in which nothing has been of any use except the application of the X-rays. As regards the latter, however, an impression seems to prevail that their employment in that particular region may produce sterility. (*See also under* "Itching," "Fistula," etc.)

Anus, Preternatural **81**

This term denotes a condition in which the opening of the bowel is situated elsewhere than normally, the excreta escaping as a rule involuntarily. The abnormality may be congenital or it may be the result of an injury or disease, as, for instance, after a strangulated hernia. An anus of this description has to be provided sometimes by an operation, when the

natural opening is closed by a tumour, or otherwise.

Aorta, Aneurysm of **82**

The aorta is the largest blood vessel in the body, going from the heart through the chest and into the abdomen. It is subject to the same diseases as other blood vessels, but especially to aneurysm in its upper part. Gout, syphilis, alcoholism and rheumatism, are the most frequent causes leading to aneurysm of the aorta. Or it may result from violent and sudden exertion. It gives rise to pain, difficulty in swallowing, shortness of breath, a dry metallic cough. After a while there is a distinct pulsating tumour to be seen in the part affected. A characteristic symptom is an inequality in the pulse if felt at both wrists at the same time. The usual simultaneousness is absent.

The treatment of aneurysm of the aorta consists in absolute rest, mental and physical, and a moderate dry diet. That it is an exceedingly dangerous disease with poor chances of recovery goes without saying, but with the necessary care, life can be prolonged for a considerable time. Constant medical supervision is absolutely essential.

Aphasia **83**

The essence of aphasia is paralysis of speech without loss of consciousness or understanding. The patient knows what he wants, but cannot recall the word he wishes to use. The cause is as a rule the bursting of a blood-vessel in the left brain, as evidenced by the fact that aphasia generally goes together with paralysis of the right side of the body. Aphasia is seldom recovered from completely, and even the partial recovery is very slow and gradual. If the patient cannot express his thoughts in writing—either in the place of, or in addition to, the loss of speech the form of aphasia in such cases is called "agraphia." "Amnosia" means the loss of memory necessary to name certain objects or persons. In "Alexia" or "word-blindness" the patient is unable to understand as he did formerly—written or printed matter.

The treatment of aphasia from that of the condition which has given rise to it consists in re-educating the patient to learn words or letters anew.

Where the aphasia has occurred after excitement or through overwork without there being any paralysis present, this should be regarded as a serious warning and the patient should abstain from all exertion, bodily or mental, for some time. Stimulating food and drink, especially alcohol, must be avoided entirely.

Aphthæ **84**

These are small grey patches on the gums, tongue, and the inside of the cheeks and lips, seen especially in weakly and delicate children during their first dentition. They develop into little ulcers which are rather painful and which, though they heal in a few days, are apt to recur pretty frequently. The application of a little glycerine of borax—or of a 10 per cent. solution of nitrate of silver in adults—is generally sufficient to effect a cure, but attention must be paid at the same time to hygienic requirements and cleanliness particularly. The baby's mouth must be washed carefully before and after feeding, and nothing must be placed into it, such as comforters, etc., likely to cause irritation. If a feeding bottle is used, it should be kept as scrupu-

lously clean as possible. (*See also under* "Thrush.")

Apoplexy **85—87**

A vast number of people seem to be unable to distinguish between the two terms "apoplexy" and "epilepsy," frequently using the one when they mean the other. Apoplexy is really not a scientific term, for it means nothing else but "disablement" or "stroke," and that may mean anything. In practice, however, it means "a stroke caused by a sudden alteration in the brain." This alteration may be the result of a burst blood-vessel, a condition called "cerebral hæmorrhage," or of a sudden blocking of a blood-vessel by a clot of blood. This latter condition is called "embolism"—from "embolus," which means "wedge" or "plug," and occurs chiefly in persons with valvular heart disease. The attack of apoplexy—or apoplectic seizure — is sometimes ushered in by premonitory signs, extending over days or weeks, consisting of giddiness, twitchings, headache, etc. These are, however, as a rule ignored, not seeming serious enough, and the attack comes on with alarming suddenness. The patient falls down unconscious, or he becomes so in the course of a few minutes. He breathes heavily, the legs and arms fall back limp when raised, the facial muscles may show signs of distortion. The pupil of the eye does not contract when a strong light is brought close to it. The longer this state of unconsciousness lasts, the worse the outlook in those cases in which death does not take place immediately. In most cases, especially if there have been no previous attacks, the patient regains his senses in the course of a few hours, or at any rate within a day or two. He is then seen to be paralysed on one side of the body—this one-sided paralysis is called hemiplegia—and it is generally the side opposite to that in which the trouble in the brain occurred. The cause of this lies in the circumstance that the nerves which go from the brain to serve the different parts of the body cross over on to the other side near the base of the brain. That is to say, the nerves which supply the right arm or leg come from the left side of the brain and vice-versa.

86. The golden rule in treating an apoplectic, like any other fit, is to do as little as possible. The patient should be placed on the floor or on a couch in a recumbent position with the head raised a little, the clothes should be unfastened at the neck and waist, and no attempt should be made to remove him before a doctor has seen him. Many lives would be saved if this simple procedure were adopted in every case. Under no circumstances should brandy or another stimulant be administered to a person in a fit who has what is called the "apoplectic habit"—that is, a florid face, a short neck and a fat body, and who appears to be more than forty years of age. An ice-bag, if at hand, or cold bandages, may be applied to the head and a hot-water bottle to the feet—which must not, however, be too hot for fear of producing blisters unknown to the sufferer. It is scarcely necessary to say that a doctor must be summoned immediately. He may or he may not make use of the old-fashioned remedy of venesection, or blood-letting, which is not resorted to as often nowadays as in former years. At all events, he will give further instructions as to the management of the case and treat it as required. The

patient will have to remain in bed at least a fortnight, on a low diet, and free from excitement of any kind. The resulting paralysis is recovered from very slowly, if at all.

It is advisable in these cases to let the patients lie on a water-bed as they are rather apt to develop bed-sores.

Gentle massage and passive movements may be practised from about the tenth or twelfth day, and the use of an electric battery for the recovery of the lost muscular functions may also be commenced about the same time. It is not customary to give drugs to patients recovering from an apoplectic seizure, though sometimes a tonic of iron and quinine is of a little assistance.

Where the paralysis has lasted more than three months, and signs of contractures in the limbs begin to appear, all further treatment may be discontinued, there being then no hope of recovery.

87. With a view to preventing apoplectic attacks persons of the build referred to above must be careful to avoid mental excitement or physical over-fatigue. The commonest cause lying in a degeneration of the arteries, known as arteriosclerosis, preventive measures directed against the latter will also have some influence in warding off apoplexy.

The term apoplexy is used occasionally to describe the bursting of a blood vessel in the lungs, the ovaries, the liver, or any other organ. One speaks then of pulmonary apoplexy, ovarian apoplexy, etc. Fulminant apoplexy means an attack which is immediately fatal.

Appendicitis. **88—90**

The "appendix vermiformis," inflammation of which is called "appendicitis," is a small tube varying from three to six inches in length and about as thick as a goose-quill, attached to the bowel on the right side of the abdomen. Its function is not known, unless it be as has frequently been said, to supply work for surgeons. It ends in a blunt point which is closed, but at its commencement it is in open communication with the bowel. This explains at once why appendicitis is so frequent, and also why it is as a rule sudden. Some foreign substance, say a cherry stone or pip, enters from the bowel into the appendix instead of going the usual way. As it cannot get out again it sets up an irritation which leads to inflammation, and there being very many microbes in the neighbourhood an abscess soon results. If by a fortunate chance an abscess does not result and the inflammation subsides of itself, or if an operation takes place immediately and the diseased appendix is removed along with the pus or matter around it, the patient recovers. But if the abscess bursts, and the pus enters into the abdominal cavity, the result is peritonitis, and the patient as a rule dies.

89. A sudden sharp attack of pain on the right side of the abdomen, particularly if followed by vomiting and a rise of temperature, is always a suspicious sign, though, besides appendicitis, there may be other causes for it. It requires a doctor's diagnostic skill to find out the right one, and to decide whether an operation is necessary or not. Many cases of appendicitis recover without an operation, but one is generally decided upon in a second or third attack. In a first attack, unless the symptoms are very urgent, it is usual to try first rest in bed and hot fomentations. The

diet must be of the simplest—mostly milk—and no purgatives are permissible. Appendicitis is rare in old people and more frequent in men than in women. It is not a new disease, as some people think, but it was known formerly by other names, such as typhlitis, perityphlitis, etc., though it cannot be denied that it has become much more frequent probably owing to the modern luxurious diets. Appendicitis is rare among uncivilised natives.

90. The name of chronic appendicitis is given to a repeatedly recurring colicky pain in the region of the appendix. For such cases the best treatment is the removal of the appendix by an operation undertaken during a free interval.

Many neurasthenic patients present symptoms resembling those of appendicitis, which are, however, part of their condition and by no means due to disease of the appendix. Acute and chronic indigestion are also apt to be mistaken by timid people for appendicitis.

Appetite, Disorders of. 91

The appetite is generally poor or lost altogether in every condition of ill-health so that it is not a symptom of any definite disease. But in most cases an impaired appetite means a disordered state of the digestive organs, especially the stomach.

A voracious appetite technically called bulimia, is as a rule a sign of diabetes, but many healthy people, particularly if they follow a very laborious occupation, eat large quantities of food, sufficient to make their friends uneasy—not only on the score of expense. The result is generally early decay and death in the prime of life. It is always safer to eat too little rather than too much. A big appetite in children—*and adults*—is often a sign of worms. Many epileptics exhibit very alarming appetites, and a ravenous desire for food is a frequent sign of insanity.

Total loss of appetite and aversion to food is a common symptom of many forms of hysteria and insanity. It goes by the name of anorexia. It is in such cases that forcible feeding—a process much heard of in connection with hunger-strikers — has to be resorted to.

The appetite of children for sweets is a natural one, and provided these are free from injurious adulterations it deserves to be encouraged rather than combated. It is the impurities, and insufficient mouth-hygiene, not the sugar or other nutritious elements which are responsible for the damage to the teeth.

Arcus Senilis. 92

An opaque ring just within the margin of the cornea of the eye, often seen in old people. It runs in families. It begins as a rule on the top of the cornea as a greyish or white spot and increases gradually till it forms a complete ring. There is no treatment for the condition which is quite incurable. It interferes but little with the eyesight.

Arsenic, Poisoning by. 93

Chronic poisoning by arsenic, giving rise to long-continued illness, takes place in workers in green wallpapers, artificial flowers, coloured toys and sweets, etc., and occasionally through the drinking of accidentally contaminated beer. The symptoms are irritation of the eyes and nose, dryness of the mouth and throat, colicky pains

in the abdomen, general weakness, neuritis, giddiness, sleeplessness, eruptions on the skin and many others. No other treatment but removal of the cause, or the adoption of the necessary precautions, is required, but a change of air is of the greatest benefit. It is important to remember that the constant occupation of rooms with bright green wallpaper has its dangers, though they are not very great.

Some cases of chronic arsenic poisoning present features of paralysis which are best treated by warm baths and massage.

As to acute arsenical poisoning—generally heard of in connection with murder trials—the symptoms are a burning pain in the stomach, thirst, and vomiting, blood in the stools or in the urine and more or less pronounced nervous manifestations, such as loss of consciousness, delirium, cramps, etc. The treatment consists in washing out the stomach, the application of heat, and the administration of stimulants.

In the proper medicinal doses and given with care, arsenic is one of the most useful drugs we possess. It is employed in a number of diseases from anæmia to syphilis, the preparation known as salvarsan being an arsenical product.

Arteries, Diseases of. 94—95

Arteries are those blood-vessels which carry the blood from the heart to the various parts of the body after it has undergone the process of oxygenation in the lungs. The chief arteries are the aorta and its large branches, the latter including the sub-clavian and brachial which supply the upper extremities, the carotid which supply the head and neck, and the iliac which supply the lower extremities. These branches again subdivide into smaller branches, and so on, until the final branches are very minute, as for instance in the skin.

The arteries are subject to several diseases of which the principal and commonest is known as arteriosclerosis. It means a thickening of the walls of the arteries, in consequence of which they lose their elasticity so that they become in extreme cases like rigid tubes and thus liable to burst, as already mentioned under "Apoplexy." Arteriosclerosis is a more or less normal process in old age. In younger people it is generally the result of very laborious occupations or one of the symptoms of chronic lead-poisoning, gout, and rheumatism. Those who are known as "good livers" usually develop arteriosclerosis sooner or later, through excessive indulgence in rich food, good cigars, and alcoholic drink. For these reasons men are more subject to arteriosclerosis than women.

95. The symptoms of arteriosclerosis are a hard and tense pulse, a high blood-pressure, impairment of the digestive functions, a tendency to angina pectoris, shortness of breath, diminution in the quantity of urine secreted, a feeling of lassitude and mental fatigue, often amounting to incapacity for work, insomnia, headaches, cramps in the legs, especially at night, and numerous others more or less troublesome.

The treatment of arteriosclerosis is merely one of prevention, for when the disease is once established it is practically incurable. On the other hand, by a suitable mode of life the further progress of it can be checked and life can be prolonged indefinitely. The diet should be as sparse as possible and contain little animal

food. Alcohol, tea, and coffee must be avoided. Moderate exercise, warm baths and massage are helpful in promoting the action of the skin. All violent efforts should be abstained from. No such thing as running to catch a train or tram is permissible. The residence should, if possible, be at a low altitude, not involving any climbing.

The bowels should be attended to regularly so as to prevent straining.

Drugs are not of much use, though potassium iodide is frequently given to diminish the high tension in the circulation.

As arteriosclerosis is one of the hereditary diseases, members of families in which gout and rheumatism are prevalent will be well advised to adopt the above preventive measures in good time.

Recently, arteriosclerosis has been treated more or less successfully by radium, radium emanations, and radium baths.

Ascites. 96

Ascites is a form of dropsy which shows itself in an enlarged abdomen, the cause being generally disease of the liver. The discomfort becomes sometimes so great that it is necessary to perform what is called the operation of "tapping the abdomen" and to liberate the fluid, an operation which has often to be repeated several times.

In milder cases the absorption of the fluid is promoted by attention to the bowels, the skin and the kidneys. Compound jalap powder in half-teaspoonful doses may be given two or three times daily to prevent constipation. To encourage free secretion of urine, syrup of squills in half to teaspoonful doses and copaiba balsam in the well-known capsule form are of great service. Potassium iodide also assists absorption. The patient's condition permitting, hot baths or vapour baths are effective in reducing the quantity of fluid by perspiration. In some cases the same result has been obtained by the application of electricity to the abdominal walls, in others by a diet of skimmed milk exclusively.

Ascites must be distinguished from several other conditions presenting the same appearance. (*See* "Liver, Diseases of.")

Asphyxia. 97

Asphyxia (which literally means pulselessness) or suffocation may be caused in various ways; for instance, paralysis of the nerves or muscles of respiration, disease of the lungs, stoppage of the air passages by tumours or spasmodic contracture, the entrance of foreign bodies into the windpipe, strangulation, hanging, drowning, etc. Under the heading: "First-aid," I shall deal with the question of resuscitation in asphyxia. Here I will only mention that no hope should be given up of saving a suffocating person as long as the heart's action continues. When that has stopped all efforts are unavailing.

The symptoms of asphyxia are lividity, convulsive twitchings about the mouth and limbs, prominence of the eyeballs and, shortly before death, blackness of the lips and tongue.

By asphyxia neonatorum is meant a pulseless condition of the newly born baby brought about through the arrest of the circulation of the oxygenated blood. Resuscitation is generally effected by slapping the child's back and buttocks, or by sprinkling it alternately with hot and cold water, though

in severer cases more energetic measures may become necessary.

Appliances have recently been invented which induce artificial respiration in cases of asphyxia neonatorum.

Asthma. 98—101

The term asthma is used indiscriminately to denote shortness of breath, no matter to what it is due. Its real meaning, however, is difficulty of breathing, coming on in paroxysmal attacks, usually in the night, in consequence of a spasmodic contracture—or a kind of cramp—in the air-tubes of the lungs. For this reason one calls real asthma also bronchial or nervous asthma in contradistinction to cardiac asthma, which is a form of occasional shortness of breath due to disease of the heart. But it is wrong to speak of asthma in sufferers who are more or less constantly short of breath, as is the case with consumptives.

Attacks of asthma are produced in people who have a tendency to them by various causes, such as irritation of the nostrils or throat by dust, fumes or other agencies, change of climate or of weather, excitement, indigestion, etc.

99. An attack of asthma may last from a few minutes to several hours, in severe cases one or more days. It may be accompanied by a cough, and it generally begins to subside with the appearance of some phlegm. Between the attacks, the patient generally feels well unless they follow one another in rapid succession. In the latter case permanent signs appear, such as raised shoulders with the head buried between them, a stooping posture, a more or less troublesome cough, palpitation, etc.

An attack of asthma is easily recognised. The patient is awakened by a feeling of suffocation, and he fights for his breath by assuming the easiest position for that purpose, such as sitting up and bracing his shoulders, or holding his head back and straightening his neck. He exhibits every sign of anxiety and distress. There is no fever.

In most cases the attack comes on without any warning, but some patients experience a sort of premonition either in the form of flatulence or a series of sneezing bouts.

100. The treatment of asthma divides itself into the treatment of the single attacks and the prevention of subsequent ones. As to the former, if the cause is known, it must be removed forthwith. For instance, a full stomach or an indigestible meal requires the immediate use of an emetic. Where no such course can be adopted, one or more of the various remedies employed in asthma should be tried. Frequently one fails where another succeeds. A popular remedy is the inhalation of the fumes from burning blotting-paper saturated with nitre solution (20% solution of potassium nitrate) or from burning stramonium leaves. The latter are also made up in the form of cigarettes which are smoked like tobacco cigarettes. Then there are the ammonium chloride inhalers of which there are several on the market. In very severe cases it becomes necessary to send for the doctor so that he may administer a little chloroform, give an injection of morphia or prescribe some sedative internally.

101. The prevention of further attacks is a more difficult matter. In the first place the cause must be sought and if at all possible dealt with.

Where, for instance, there is disease of the womb or of the nasal mucous membrane requiring attention, a cure of the same will almost immediately cure the tendency to asthmatic attacks. Otherwise such drugs as potassium bromide, potassium iodide, arsenic and others, render occasionally excellent services and they are worth trying—naturally with the consent of the medical attendant. Recent additions to the remedies employed against asthma include calcium lactate, which has shown good results, adrenalin, pituitary gland extract and urethane, the latter given chiefly to children, in doses of 5 grains.

In inveterate cases improvement has been obtained by repeated washing out of the stomach and duodenum. As regards climatic conditions no two cases of asthma are alike. One will do well at the seaside or in foggy weather, another will get worse in the country or when the sun is shining brightly. Each asthmatic patient has to find out for himself what place suits him best.

Atavism **102**

In speaking of heredity in connection with disease one often uses the expression "atavism." It means something inherited from generations preceding that from which the patient has sprung. The word comes from the Latin word "atavus"—ancestor. Gout, for instance, frequently appears in grandfather and grandson, but not in the father or mother. The same thing applies often to mental disorders.

Ataxy (Ataxia) **103**

Means an inco-ordination of muscular action, that is, one set of muscles acts without the co-operation of the others which normally lend it support or even in a sense contrary to that of other muscles. Frequently the term is used as synonymous with locomotor ataxy (*which see*).

Athetosis **104**

A condition something like St. Vitus dance, seen in children and characterised by continual slow change of position of the fingers and toes. The child seems unable to resist irregular spasmodic movements of the hands and feet, or to remain at will in a certain position. Athetosis is generally the result of an attack of paralysis of a slight character. The chances of complete recovery are not very favourable. The treatment consists in tonics, the application of massage and electricity, and suitable gymnastic exercises.

Atrophy, General or Local **105**

General atrophy, or wasting, is seen principally in young children as the result of injudicious or insufficient feeding, though it is frequently an accompaniment of organic disease. In older people it is generally a consequence of consumption, cancer, or other illnesses. The condition is described under the heading "Marasmus."

We speak of local atrophy when a particular part of the body or a particular muscle or set of muscles shows signs of wasting, either through non-use or through an insufficient blood-supply.

Atrophy being a symptom or result of disease and not a disease in itself, the treatment naturally depends upon that of the cause. (*See under* "Muscles, Diseases of.")

Auto-Intoxication **106**

A process of poisoning brought about by some substance originated

in the body of the person or animal concerned, generally in the stomach or bowels as a result of decomposition of food. The symptoms are headache, dizziness, sleeplessness, lassitude, nervous exhaustion, migraine, etc. Frequently the most prominent symptom and possibly the only one is an eruption of the skin.

The treatment is one of prevention by attention to the laws of hygiene and especially to the action of the bowels. Where auto-intoxication is present a sharp purgative and a gastro-intestinal antiseptic, like salol, taken internally in 5 or 10-grain doses, soon effect a cure.

Babies, Care of **107—109**

The following hints on the subject of rearing babies will prove of value to inexperienced young mothers and others. A newly-born baby's bath should have a temperature of about 100 degrees. After the bath the baby must be dried carefully, and the cord dusted with an antiseptic powder, like boracic acid. Baby's binder and clothing should be woollen, by preference. If its hands and feet are cold and blue it wants more external heat, but care must be exercised in the application of hot water bottles to prevent scalding —a rather frequent occurrence. In fine summer weather a baby may be taken out when it is three days old. During the winter months it is safer to wait at least one week. A newly-born baby should sleep 22 hours out of the 24, and this allowance may be reduced gradually. At two years of age a child requires 12 hours' sleep. The baby will normally be able to hold up its head at the third month, to sit up by the seventh, to walk by the twelfth, and to talk before the eighteenth. To these averages there are many exceptions perfectly compatible with good health.

108. A sign that a baby is doing well is the closing up of the posterior fontanelle—the soft membranous depression towards the back of the head —at about the second or third month. The one to the front closes much later, sometimes not before the end of the second year.

Babies should be weighed repeatedly. This is the best method of ascertaining whether they are thriving. A healthy, normal baby should weigh at birth about 7lbs., at one month of age about 7½lbs., at two months about 8lbs., at three months about 9lbs., at six months between 12lbs. and 15lbs., at twelve months between 18lbs. and 20lbs., and at two years about 30lbs. Female babies are generally of somewhat lighter weight than male.

109. If the baby is given a "comforter," and it is by far preferable to do without it, it should be scalded or boiled at least once daily. Nor should it be replaced in the baby's mouth after it has fallen on the ground without being washed first. This is a precaution, the neglect of which is responsible for many illnesses, including diphtheria.

The practice of "shortening" the baby—in other words of changing the long clothes for short ones—must be carried out with caution. In cold weather it is better to postpone it for some time rather than adhere to the custom of effecting it at the age of a month.

Babies, Feeding of **110—115**

The dreadful waste of child-life, which is a characteristic feature of our industrial communities, and one of the most deplorable incidents in the development of our large towns, is due in a large measure, if not alto-

gether, to the injudicious feeding of infants. No baby should be fed otherwise than by its mother's milk, and those fed with cow's milk should form only a small minority. Many mothers neglect this primary duty of a parent from motives of selfishness or convenience, and so many others are compelled by economic reasons to forego what should be to them an unalloyed pleasure. And the mischief does not end here. A large number of ignorant mothers and foster-mothers seem to imagine that everything is food for a baby which is food for adults, and one has but to read the daily newspapers to see how many poor little children lose their lives through no other reason. Let it therefore be understood that where a child cannot be fed on human milk—the food provided for it by nature—cow's milk is a reasonable and safe substitute. It should be diluted with about twice its volume of water and a little sugar to make it as nearly as possible like human milk, but the main point is that during the first six months of its life no child should have any other food but milk. As soon as the teeth begin to appear it is not only permissible but advisable to give it some solid food in the shape of bread and milk or biscuit and milk. To this may be added gradually custard- pudding, meat-gravy, and as the teeth develop in the course of the second year, meat and other things.

111. A breast-fed baby should be nursed at regular intervals, and the following arrangement may be observed as nearly as it can be conveniently carried out: During the first six weeks the feeding should take place every three hours during the day, and not at all during the night.

Each feed should last about a quarter of an hour, and the baby must on no account be allowed to fall asleep while nursing. Both breasts should be used at each meal, and after each nursing washed with some lukewarm water. Some doctors recommend a solution of boracic acid, but this is not necessary if cleanliness is observed.

The suckling should never be prolonged into the second year, and the average age at which a normal healthy baby should be weaned is nine months.

112. Where there are reasons for the suckling to be discontinued at an earlier age, this should not be regarded as an excuse for not giving the baby the breast at all. The principle should be followed that *breast-feeding is better than artificial feeding, and even one month's breast-feeding is better than no breast-feeding at all.*

The first sign that a baby is not thriving on its mother's milk is failure to add to its weight. Then it becomes feverish, the stools appear unhealthy and occur irregularly, and there is much fretfulness and restless sleep. Attention must then be directed to the condition of the mother, and especially to her mode of life. There can be no question, for instance, that a suckling mother ought under no circumstances to take intoxicating drink, even in small quantities. Nor must she eat anything spicy or seasoned with vinegar, sauces, etc. Fancy dishes are best avoided, and it is a golden rule to *abstain from everything concerning which there may be a doubt as to whether it will agree with baby.*

113. It is true most mothers find out very quickly what they should eat or drink, and what to abstain from whilst they suckle a child, and they cannot go wrong in following their natural inclinations. Very often a

baby at the breast suffers from colic or diarrhœa because the mother has taken some strong purgative. Castor oil is, as a rule, the safest aperient for suckling mothers.

A common cause of disturbances in breast-fed children is an insufficient consumption of liquid on the part of the mother. Hence the advisability of a diet rich in fluid, especially milk.

I need hardly say that a suckling mother is not doing her duty to herself and her child if she does not lead a quiet, uneventful life away from all physical and mental excitement, and I am afraid that in this respect the advent of the cinema cannot be regarded as an unmixed blessing. I have seen repeatedly, cases which have caused me to form this opinion and from conversations with other doctors I am not the only who has done so.

114. As to the artificial feeding of babies I must refer to the question which has been revived and discussed very much of late, namely, whether it is safer to give to children raw cow's milk or milk which has been previously boiled. The controversy is by no means settled, and until this can be said to be the case the weight of evidence so far is that the advantages of boiled milk outweigh the disadvantages and risks. Nor is there on the other hand much to be gained by the employment of milk which has not undergone the process of boiling, or at any rate that of pasteurisation—which means heating to a temperature of between 60 and 70 degrees C. (160-170 degrees F.), at which the injurious germs are supposed to be destroyed. I therefore continue to be in favour of the view that to boil the milk intended for babies is the safer course to adopt—except in those cases where one has under one's absolute control the source of the supply, and there can be no possible suspicion that the milk is in any way contaminated—a condition but rarely satisfied.

115. The number of feedings and the intervals between the same are like those stated with reference to breast-feeding.

Of the many artificial infants' foods on the market, all I can say here is that some of them are unquestionably of the highest value, but they must not under any circumstances be regarded as equal to the natural article, and as a matter of fact no reputable firms claim for their products that they are in every respect like mother's milk. Their use should in every instance be looked upon as a necessary evil, and be limited to cases in which natural feeding is really absolutely impossible.

Backache (Lumbago) 116—118

Pain in the back is one of the most frequent symptoms one meets in medical practice, and the reason is that it is due to very many causes. Most illnesses of an acute nature, such as pneumonia, influenza, smallpox, etc., give rise to backache. Then, almost all the ailments associated with the abdominal organs, like flatulence, constipation, ulcer of the stomach, diseases of the liver, and so on, cause bachache. Kidney troubles also are accompanied by more or less pain in the back. In fact it would take a great deal of space to enumerate all the conditions of ill-health in which backache is a symptom. But by far the commonest causes of pain in the back are:—Over-fatigue of the muscles of the back either through prolonged standing or stooping; muscular rheumatism, and especially that form of it which is known as "lumbago." The

backache of which many young people complain is due partly to the first-mentioned cause and partly to the weakness of the vertebral, or spinal, column, which tends to become curved either towards one side or the other. This affection is well known as "curvature of the spine," and is treated by suitable apparatus combined with exercises and rest.

117. Naturally, one will always look for the cause of all the backache and remove it or palliate it as far as possible. Thus a brisk purge will often relieve acute pain in the back caused by constipation.

But there always are quite a number of cases of backache, acute and chronic, which are more or less obscure as regards their origin, and one has no alternative but to class them as "lumbago," and to treat them accordingly. In the first place the pain is so severe, as a rule, that something must be done at once to relieve it. The favourite remedy is hot applications, such as hot poultices or fomentations, or hot plates or sandbags, and, if someone can be got to do it, a good plan is to go over the painful places with a hot iron such as is used by laundresses, after placing a thick layer of brown paper over the skin first. A more heroic measure is that mentioned under the heading "Acupuncture." In some people the application of ice brings instant relief if placed on the back in the form of ice-bags. Then there are a number of cases in which the pain does not become so acute, but is felt constantly as a kind of dull, gnawing ache with occasional sharp reminders. These derive considerable benefit from Turkish baths or the various forms of radiant heat baths, from massage and electricity. The wearing of a warm flannel bandage—not a leather belt—is also of great assistance in preventing the occurrence of sharp attacks. Occasional friction with camphor liniment, belladonna liniment, aconite liniment or the so-called A.B.C. liniment—because it consists of aconite, belladonna, and chloroform liniments in equal parts—as the necessities of the case demand may be employed, but caution is indicated as these preparations are more or less poisonous, and poisoning may occur even through their being applied outwardly only. The same thing may be said with regard to the wearing of a belladonna plaster which many patients find very useful.

118. A lotion frequently employed for rubbing the painful muscles which consists of 2 ounces lime water, 2 ounces olive oil, and 1 ounce chloral. Brisk rubbing with turpentine is sometimes very effective if followed by the application of thick layers of cotton wool fixed with a flannel bandage.

Of internal remedies aspirin, helicon, and salicylate of soda are the most reliable. They may be taken in tabloid form and in doses of from 5 to 10 grains two or three times daily after food. It is usual, when the pain is very severe, to give a much larger dose at first—up to 30 grains of salicylate of soda, or 15 grains of aspirin—and to follow with smaller doses afterwards, but this must be left to the discretion of the medical attendant. In the more chronic cases, potassium iodine is to be recommended. It also can be taken in the form of solid tablets which should be crushed and dissolved in a glass of water—the dose is on an average 5 grains three times a day—or in the following combination with iron: Pot. iod. 36gr., citrate of iron and ammonia 60gr., peppermint water to 6oz.; one

tablespoonful three times a day after meals.

Back, Accidental Injuries of 119

The commonest injuries to the back as a result of accidents are sprains of the spine, which are best treated by rest in bed and the application of hot fomentations and camphor liniment. More serious accidents may cause dislocation and fracture of the vertebræ, which obviously require the most skilful surgical attendance, or concussion of the spinal cord which on account of its frequent occurrence in railway accidents is also known by the name of "railway spine." This latter disease may be very chronic, and it is sometimes a source of protracted litigation because of the difficulty to distinguish it from neurasthenia or malingering.

An examination with the X-rays will show whether any of the bones have been fractured or dislocated, and if this is not the case the most prominent symptoms, namely, the pain and the stiffness, will gradually disappear under the influence of rest and other measures mentioned under the heading "Backache." A reasonable amount of exercise after the acute symptoms have subsided is to be encouraged.

Backwardness in Children 120—121

As a rule backwardness in children is due to some physical condition of ill-health, and among the most frequent are included rickets and adenoids. Children thus affected are slow in beginning to walk or talk, they are late in cutting their teeth, their mental development takes place slowly. At school they are dull and stupid, they seem to take very little interest in anything. Their facial expression is characteristic, the mouth is more or less constantly open, the nose seems stopped up, and the breathing is laboured. Sleep is disturbed, the appetite poor and the weight remains stationary.

There are, of course, degrees of backwardness and defectiveness from mere simple deviations from the normal to pronounced feebleminded-ness. In early stages the correction of some slight deformity in the nose or naso-pharynx may effect a complete transformation. Where the cause lies in rickets the adoption of the necessary measures will bring about a more gradual improvement. More obscure cases may require a serious surgical operation and sometimes the condition is past all treatment.

121. Not too much stress can be laid on the advisability of a medical examination whenever there are signs of backwardness in a child.

It happens occasionally that children who have previously been extraordinarily intelligent or even precociously clever become suddenly rather stupid and indifferent. This is a sure sign of mental over-fatigue and the result of excessive brain-activity. The necessary correction and hygienic measures must be applied without loss of time.

That eyestrain is a frequent cause of backwardness in children is well-known, and I have in the course of my practice repeatedly seen striking changes in the mental attitude of boys and girls through the simple device of recommending suitable eyeglasses or spectacles. One such case I saw in a child two years of age.

Backwardness is also occasionally a sign of epilepsy, and I have known instances of children in which for a considerable time it formed the only

symptom of this disease. (*See also under* "Cretinism" and "Infantilism.")

Bacteria and Bacteriology 122—123

In these newspaper-reading times hardly a day passes but what one comes across such technical terms as "bacteria," "bacteriology," "bacilli," "microbes," "micro - organisms," "microbial infection," and numerous others which refer to the causation of diseases by minute living organisms invisible to the naked eye, but visible under the microscope, and belonging mostly to the vegetable world. The one in most frequent use is "bacteria." It is derived from a Greek word which means "a rod," because most bacteria are rod-like in shape when seen under the microscope. Bacteriology is that branch of medical science which concerns itself with bacteria from every possible point of view.

Bacteria require for their growth and existence, as a rule, oxygen, nourishment—mostly in the form of albumen—moisture, and rest. They get destroyed under the influence of excessive heat or cold, movement, electricity, and other agencies. These elementary principles find application in the various methods of treating diseases resting on a becterial basis.

The presence of bacteria is responsible for fermentation and putrefaction whenever and wherever these processes take place.

123. Bacteria which thrive without the presence of air (or oxygen) are called anærobic, those which get destroyed unless they have plenty of air are called ærobic.

Quite a number of diseases are now known or supposed to be caused by bacteria. I need only mention as examples: diphtheria, consumption (tuberculosis), tetanus, leprosy, pneumonia, influenza, erysipelas, anthrax, typhoid fever, etc., etc.

By "bacteriological examination" we mean an investigation with the object of demonstrating the presence of certain bacteria in a specimen of blood, expectoration, or other discharge from some part of the organism or in a portion of a tumour. When such bacteria are found to be present we speak of the result as being positive, otherwise the result is said to be negative. A positive result is generally regarded as undoubted evidence of the disease being present. When, for instance, tubercle bacilli are found in the expectoration of a person supposed to be suffering from consumption, this is considered as indisputable proof that he is really the victim of the disease in question. On the other hand a negative result is not always considered as absolute proof the other way.

Barber's Rash 124

It is rather unfortunate that the term "barber's rash" or "barber's itch" is in such frequent use, for the disease is often attributed to a hairdresser's negligence when it is due to some other cause. It would be better to call it by its technical name, which is sycosis or tinea sycosis. The disease is doubtless an infectious one, the parasites being inoculated by some means or other. It is characterised by the presence on the face of pustules or vesicles through which the hairs perforate and by large, lumpy or nodular swellings. When the hair is pulled out, the root of it is found to be dry. The upper lip is seldom affected. Treatment often appears to be useless, but it generally succeeds in the end. The best way to go about it is to

extract the affected hairs as long as there is any inflammation present, and to apply some anti-parasitic lotion or ointment. If there are any crusts they must be removed by the aid of oil and fomentations. This also makes the extraction of the hairs less painful and easier. As to lotions and ointments the following are all fairly reliable: Carbolic acid, 5 per cent. solution, Iodine tincture, Mercury Nitrate ointment (called also citrine ointment), white precipitate ointment, sulphur ointment, etc. It really does not matter which one is used, but it must be used perseveringly for many months, if necessary.

In some cases the X-rays render good results, and in others it is often found necessary to employ vaccine treatment.

Barley Water **125**

Is prepared by boiling two ounces of pearl barley in 1½ pints of water and straining afterwards. It is a useful drink in the diarrhœa of children and also as a quencher of thirst under feverish conditions. The dose varies from one to four ounces.

Baths, in Common Use **126—130**

(1) Cold baths are suitable for people in robust health, and those who are more or less delicate should leave them alone. A cold bath should always be succeeded by friction with a rough towel until the skin feels glowing with warmth.

(2) Hot baths for children and invalids should never be prepared by letting the hot water run first. Always begin with the cold and add hot until the requisite temperature is obtained. Never trust to the hand, always use a thermometer. The temperature of the bath should seldom exceed 100 degrees Fahrenheit except by special order.

(3) Alkaline baths are prepared by adding carbonate of soda in the proportion of one ounce to four gallons of water, or carbonate of potash in the proportion of half-an-ounce to four gallons of water. They are generally used tepid—about 90 degrees F.—and are of great benefit in many skin diseases. Alkaline baths should always be taken in earthenware, wooden, or enamelled tubs.

127. (4) Bran baths are often prescribed in irritability of the skin. They are prepared by boiling three or four pounds of bran in a gallon of water and adding the liquor to the warm water in the bath.

(5) Sulphur baths are useful in many skin diseases, especially those of a parasitic origin. They are prepared by adding two ounces of potassa sulphurata (or liver of sulphur) to fifteen gallons of warm water. A simpler method is the employment of sulphaqua charges.

(6) Mustard baths, especially as foot-baths, are well known for their stimulating effect. Add a handful or two of mustard to an ordinary hot bath.

(7) Ozone baths as a substitute for sea-water baths are beneficial in delicate children and young people. They are prepared by adding some sea-weed to an ordinary warm bath, just sufficient to make it somewhat gelatinous.

(8) Vapour baths and Turkish baths, The former may be prepared by placing round the patient a number of hot-water bottles, and covering him up with several blankets. Care should be taken to prevent scalds and burns. Turkish baths are too well known to require description. Their object is to induce free perspiration. Turkish bath-

cabinets for home use are very useful, but are apt to cause accidents. In rheumatic and neuralgic affections vapour and Turkish baths are very valuable.

128. (9) The recently introduced electric or "radiant heat" baths are a modification of Turkish baths. The heat is obtained from a number of powerful electric lamps arranged like in a hot-water bottle, vapour, or cabinet bath.

(10) Acid baths are sometimes useful in cases of dyspepsia, with sluggishness of the liver and constipation. They are prepared by adding one and a half ounces of nitric acid and from one to three ounces of hydrochloric acid to 30 gallons of warm water in a wooden or earthenware vessel. The patient to remain in it for 10 or 15 minutes. For a footbath add half an ounce nitric acid and one ounce hydrochloric acid to 4 or 5 gallons of warm water.

129. (11) Of the various kinds of specially prepared medicated baths used chiefly at hydropathic establishments and watering places the so-called Nauheim bath is probably the best-known. It is an artificial imitation of the natural mineral water obtained in Nauheim (Germany), and is prepared in several ways, all of which have the object of producing bubbles of carbonic acid whilst the bather is in the bath. One such method consists of the addition to the water—warmed to the required temperature of about 98 degrees F. to begin with—of bicarbonate of soda and acid sulphate of soda in gradually increasing quantities, and with the temperature decreasing by one degree every other bath. Another has as its ingredients calcium chloride and common salt in various proportions and with or without the addition of carbonic acid tablets. There are several manufacturing firms who supply the necessary salts for the preparation of Nauheim baths in a convenient form. These baths are of considerable use in rheumatic affections and skin diseases, but their chief indication is the presence of heart trouble. As a rule they are prescribed in combination with suitable exercises.

130. (12) What are known as mud-baths, moor baths, or peat-baths, are prepared by the addition of peaty earths containing more or less mineral matter. They are employed chiefly in cases of chronic lumbago and various forms of neuralgia as well as in diseases peculiar to women.

(13) Of other medicated baths I might just mention the oxygen bath—in which oxygen takes the place of carbonic acid, the brine bath, obtainable naturally at places like Droitwich, Nantwich, and Middlesbrough, or prepared artificially with brine brought from these places, the pine bath prepared by adding a decoction of pine needles or pine extract, the mercurial bath prepared by vaporizing calomel over a spirit-lamp, etc. It is also customary to speak of sun-baths (helio-therapy) or light baths which consist of exposure of the body to the rays of the sun or various light-producing appliances.

(14) The difference between a hip-bath and sitz-bath—in both of which only the buttocks and hips are immersed in water—is that in the latter the patient sits on a stool instead of on the bottom of the bath.

Bed-Sores 131

Bed-sores are an unpleasant complication in diseases of long duration in which the patients are constantly in

a recumbent position. They arise through pressure against the parts where the bones project more or less, or through irritation by chronic discharges. Careful nursing is the only way to prevent bed-sores. There must be nothing in the nature of creases or folds in the sheets, no crumbs, feathers, or similar things to irritate the skin, particularly if the patient perspires. The threatened surfaces must be kept scrupulously clean and dry. They should be rubbed gently with a little methylated spirit and sprinkled with boracic acid powder or aristol. The patient should be taught to change his position as frequently as possible so as to relieve occasionally the parts in danger. When a sore or ulcer has once formed it needs the most assiduous attention and a cure often becomes a very difficult matter. Boracic acid or zinc ointment should then be applied and changed frequently. In many cases it is necessary to place the patient on a water bed or air cushion to prevent bed-sores from forming or spreading.

The following combination may be recommended as a good preventive application against the formation of bed-sores. Powdered alum half an ounce, tincture of camphor two ounces, and the whites of four eggs.

If the skin breaks, one may use a solution of silver nitrate or protargol one or two per cent. strong, applied by means of pads of lint supported by adhesive plaster. Sloughs are best removed as quickly as possible.

It is hardly necessary to add that a patient who shows signs of bed-sores must be supported by the best obtainable nourishment suitable under the circumstances.

Bed-Wetting (Enuresis nocturna) 132

This is a distressing malady not only in children but in many adults, especially young women. In the case of children, discipline, if carried out rigidly though not as a punishment, as a rule achieves a cure. They must not be given anything to drink in the afternoon and evening; they should be awakened shortly after falling asleep, and several times in the night, to urinate; they must not sleep on a soft feather-bed but on a hard mattress, and an arrangement, such as a reel of cotton or a long bottle, should be fixed to their backs so as to make them sleep on their sides only. The foot end of the bed should be raised. In addition, if necessary, small doses of tincture of belladonna, about two or three drops, twice daily, in the afternoon and evening, may be given, but this being a poisonous substance, it is not safe to use it except by medical advice.

Among the newer forms of treatment I may mention the administration of desiccated thyroid in doses of half a grain of the dried gland given twice daily to children of between two and six years of age, more to older children.

Beri-Beri 133—134

An epidemic disease prevalent in various countries of Asia (including India, China, Ceylon and Japan,) and in tropical parts of Africa and Australia. In the Malay Archipelago the mortality among the coolies from this disease is terrible. In South America and the West Indies beri-beri is seen very often and cases reach occasionally the United States giving rise to small epidemics. In Great Britain it occurs mostly in isolated instances especially at the seaports. Extensive outbreaks were reported at the Richmond Asylum in Dublin in

the years 1894, 1896, and 1897, under conditions of overcrowding.

The causation of beri-beri is now generally attributed to the lack of vitamines, certain accessory food substances which, though present in small quantities only, are nevertheless indispensable if health is to be maintained. They are contained in animal fats, vegetables, cereals and pulses, fat meat, fish, milk, yeast, eggs, but absent in vegetable oils, margarine produced from the latter, white bread, polished rice, meat extracts, and other prepared foods.

The knowledge gained in the last few years on this subject of the vitamines is one of the most important discoveries of recent times, and it has helped to elucidate many points regarding diseases which have hitherto remained obscure.

134. Various forms of beri-beri exist. The commonest are the so-called anasarcous and the atrophic. In the former the most prominent symptom is the general dropsy, in the latter the wasting of the muscles.

Other symptoms are anæsthesia, paralysis, neuritis, swellings and general weakness, with occasional shortness of breath or palpitation. The condition is not unlike that in pernicious anæmia.

The treatment of beri-beri resumes itself in providing a diet containing vitamines, such as milk, unpolished rice, yeast, etc., and in attending to the general health.

Beri-beri is also known as Kakke or epidemic neuritis. The word beri is Singhalese and means weakness.

Bilharziasis **135**

A parasitic disease caused by the presence in the blood of a small worm named bilharzia hæmatobia. It is epidemic in South and North Africa, especially in Egypt, also in Arabia, Persia, and the West Coast of India. Occasionally imported cases are seen in Europe and in the United States.

The worms find their way to various organs and give rise to such symptoms as irritability of the bladder, dull pains in the perinæum, and blood in the urine, the latter being the one which causes the most alarm. There may be also some straining at stool with blood, suggesting piles.

Sometimes the condition may exist for years without giving rise to marked symptoms and the eggs of the worms may be found accidentally during a microscopical examination of the urine. In mild cases the symptoms may disappear without any treatment. On the other hand the loss of blood may be so serious as to produce extreme weakness.

The treatment of the disease consists of rest in bed and the correction of the urgent symptoms, there being no remedies available to kill the parasites in the blood. When the bleeding from the intestines is severe, extract of male fern may be tried as in the case of tapeworm, or salicylate of soda in 10-grain doses three times daily.

It has been suggested to treat bilharziasis by injections of salvarsan, but the results have been rather disappointing.

Biliousness **136**

Attacks of migraine are frequently called bilious attacks, or biliousness, but in most cases biliousness is merely a form of acute indigestion in which a bitter taste is one of the most prominent symptoms. The latter include also loss of appetite, constipation, a coated tongue, lassitude and headaches. Attention to the diet and

a purgative medicine are all that is wanted, or the patient may take in addition from 5 to 10 grains of bismuth salicylate two or three times daily after meals. Severe cases of real biliousness with vomiting of bile as one of the symptoms are indications of liver disease. People inclined to biliousness should eat in small quantities at a time and avoid alcohol. They must also be careful about their bowels, and for this purpose they will receive considerable benefit from pills or tabloids of podophyllin and extract of euonymin, a quarter of a grain of the former and one grain of the latter, taken one or two at a time once or twice daily after food or at bed-time. (*See also under* "Liver, Diseases of.")

Birth-Marks **137**

These are generally circumscribed pigmentary deposits in the skin, varying in colour from a light fawn to a blackish tint. Sometimes they are not visible for several days after birth, but they are as a rule congenital.

The question of the removal of birth-marks is a puzzling one. Unless they cause serious disfigurement, they are best left alone. Attempts to deal with them by electrolysis, carbonic acid snow, the X-rays, liquid air or other means, are more often unsuccessful than otherwise, and extensive surgical operations have the disadvantage that they are apt to leave big scars behind. Lotions and ointments are of no use, though recently the application of formaldehyde in a 40 per cent. solution has shown a few good results. It must take place very carefully and be restricted to the diseased portions, otherwise the healthy skin may become involved. It is best to apply the liquid by means of a wooden stick. (*See also under* "Nævus.")

Bites and Stings **138**

The bite or sting from an insect should be rubbed over as soon as possible with a rag dipped in ammonia solution. The sting should be removed if left in the skin. If no ammonia is available, a lotion of strong solution of bicarbonate of soda may be tried, or one of bicarbonate of potash. If ammonia appears to increase the swelling and irritation, lime water is a good substitute. Several remedies are available as preventives of stings from insects in addition to those named. They include pennyroyal oil, camphor, oil of cloves, and eucalyptus oil. To destroy the insects themselves it is sufficient to apply near them some petroleum, or a few drops of chloroform.

After a dog-bite, the dog should not be destroyed at once, but kept secure and watched. Destruction is necessary if the dog shows signs of rabies. The place bitten should be disinfected immediately with a 5% solution of carbolic acid. It is doubtful whether sucking the wound is a safe procedure; some doctors recommend it provided there are no abrasions or openings in the mucous membrane covering the inside of the mouth. In any case the mouth should be rinsed afterwards with some disinfectant. If the dog shows signs of rabies, the wound must be cauterized at once—if nothing else is at hand, with an ordinary red hot poker. The patient should then be sent immediately for treatment with Pasteur serum, a form of vaccination. Numbers of people become unduly alarmed after every dog-bite. It is to be noted that rabies and hydrophobia are now very rare, and if the wound is disinfected as above described the danger of subsequent trouble is prac-

tically *nil*, particularly if there has been some bleeding after the bite.

In the case of a snake-bite the arm or leg should be ligatured with a tight bandage above the bite so as to stop the further spread of the venom. The wound should be encouraged to bleed freely and sucked. Afterwards some powdered potassium permanganate should be rubbed into it. Smelling salts should be administered if the patient shows signs of collapse. A serum called antivenene is now available for the treatment of snake bites. The tropical insect known as chigœ, chigger, or jigger causes a sting as big as a pea. The heat from a lighted cigarette will destroy the insect, or the sac formed by the bite may be opened, cleansed and dusted with boracic acid or some other antiseptic powder. (*See also under* "Chigger.")

Black Eye **139**

The technical term for a black eye is "ecchymosis of the eye-lid." It means hæmorrhage under the skin caused by the rupture of a number of small blood-vessels. A black eye will get better sooner if treated with cold evaporating lotions such as spirit and water or vinegar and water. The discolouration disappears in about a fortnight.

Sometimes the application of a firm pressure bandage will hasten a complete restoration to the normal state of things. If there is much pain and some little time has elapsed since the injury, hot compresses with a few drops of laudanum sprinkled on them give more ease than cold applications.

Blackwater Fever **140**

This is a condition of which the principal symptom is the presence of blood in the urine causing it to look black or deep-red. The question whether it is a form of malaria of a very severe character, or a definite disease caused by some other parasite in the blood than that of malaria or the result of large doses of quinine given to combat attacks of malarial fever is not yet settled.

Blackwater fever has been observed throughout tropical Africa, in some of the Southern States of America, in the West Indies, in Assam and other parts of India, in Burmah and also in Sicily and Sardinia. It is one of the diseases responsible for the great amount of sickness and death among the Europeans in Africa, possessing the peculiarity that it is almost limited to the white race.

In addition to the blood in the urine the symptoms include a sensation of chill, an irregular intermittent or remittent fever, vomiting, shortness of breath and jaundice.

As to treatment, opinion varies. Some authorities consider quinine, which is the recognized remedy in malaria, as useless, others give it in large doses. Salicylate of soda is a favourite with some, large doses of bicarbonate of soda with others. But all are agreed that patients with blackwater fever should as soon as possible leave the malarial region and not return to it, in order to prevent relapses. In cases of collapse the recognized treatment consists of the injection into the veins or under the skin of large quantities of saline solution.

Bladder, Diseases of the **141—145**

The commonest diseases of the bladder and neighbouring organs are acute and chronic inflammation, irritability, paralysis, tumours and stone. Those distinguished by changes in the amount or appearance of the

urine not necessarily resulting from organic disease of the bladder will be found mentioned also under various other headings. Reference to the Index will assist in ascertaining the respective sections.

The signs of inflammation—the technical term of which is cystitis—are pain in the lower part of the centre of the abdomen, a frequent *desire to micturate*, especially during the night, the patient having to get up several times for the purpose, a muddy appearance of the urine which leaves a greyish-white deposit and emits a very disagreeable odour. At the same time there is some feverishness and general discomfort. The causes of cystitis, apart from "cold," especially in gouty subjects, are irritation by a foreign body, such as a stone or a tumour, gonorrhœa of more or less long standing, and stricture.

142. The treatment naturally depends on the cause, but relief may be obtained from hot hip-baths night and morning, rest in bed surrounded by hot-water bottles or hot fomentations of camomile tea so as to induce perspiration, and the adoption of a pure milk-diet. Alcohol must not be allowed in any form whatever. Internally such medicines as balsam of copaiba in 10-minim capsules three times daily, helmitol in 10 or 15-grain doses three or four times daily dissolved in cold water and supplemented by large draughts of water between the doses, or nebzoic acid tablets are very helpful. Further treatment of a more complicated nature must be left to the attending doctor, though the practice of washing out the bladder may easily be learned so as to be applied by the patient himself. It is a form of treatment which is of considerable value in chronic cases. The patient should also wear a flannel bandage over the lower part of the abdomen.

143. Under the influence of emotional excitement it is usual with some people to be troubled with irritability of the bladder. This is not only the case in hysterically-inclined women, but frequently in men who are generally free from all signs of nervousness. It is said that many well-known politicians and others are affected in this manner when about to make an important speech.

It is therefore easily seen that the treatment of this condition depends on the cause, and that no general rules can be laid down. The one important thing to remember is that if the frequent desire to micturate is accompanied by more or less thirst and the passage of large quantities of urine, the cause of the trouble does not lie in disease of the bladder itself, but most probably in diabetes.

Under the names "atony of the bladder," "paralysis of the bladder" or "retention of urine" are included a number of conditions which are the reverse of that described in the previous paragraph. They are all characterised by severe straining and an inability to produce the desired emptying of the bladder. In passing we will just mention here that absence of micturition is sometimes due to the arrest of the function of the kidneys, that is, the latter produce no urine and the bladder is consequently empty. This is known as suppression of urine.

144. Generally the cause of paralysis of the bladder is a purely mechanical one. In other words there is as a rule an obstruction due either to stricture or to some growth or enlargement. Sometimes an existing stone in the bladder prevents the outflow of urine, at other times the difficulty lies in an actual

loss of the power which the bladder possesses of contracting itself in order to eject the urine. This is frequently noticed after a drinking bout when the bladder becomes over-full with the result that it cannot empty itself. The same thing happens very often when the act of micturition is unduly delayed for some reason or other, say the absence of the necessary convenience.

Then there is paralysis of the bladder in the true sense, as part of a more or less general paralysis of the nervous system.

The treatment of paralysis of the bladder is to empty the latter by means of a catheter; if one is not immediately at hand relief can be obtained by a hip-bath as hot as it can be borne and by other means by which profuse perspiration can be induced.

145. With regard to foreign bodies, including stone and tumours in the bladder, it is not necessary to say very much here, since both for their diagnosis and treatment one cannot dispense with the services of a doctor. When such symptoms as pain, especially after the act of micturition, accompanied by a frequent desire to empty the bladder or a sudden stoppage of the stream and the appearance of blood in the urine are more than of short temporary duration, the sooner the patient consults a skilful surgeon, the better.

Bleeding **146**

Loss of blood from any part or through any cause is well known by the name of hæmorrhage. But the term "bleeding" is still used in connection with the operation of blood-letting or venesection, so that a few words on the matter are here not out of place.

Bleeding is not as frequently resorted to nowadays as in former times, but it occasionally forms a very valuable means of treatment. This is especially the case in some forms of heart disease, in apoplexy, uræmia, eclampsia, etc. The blood is abstracted either by opening a vein, usually at the level of the elbow, or by the application of leeches, or by scarification, which means a number of superficial incisions parallel with one another, or by wet-cupping, which is scarification in a part rendered full of blood by dry-cupping it first. Whichever form of blood-letting is adopted, great care must be taken to avoid blood-poisoning and excessive hæmorrhage. The former is prevented by the use of antiseptics, and the latter by suitable bandages.

It is very rarely necessary to abstract more than from four to six ounces of blood.

Blindness **147**

Partial or total blindness may result from such causes as abuse of alcohol or tobacco, the use of certain drugs, like quinine or salicylic acid, or in association with diseases like diabetes and uræmia. Migraine, hysteria, and extreme loss of blood may also be responsible for impairment of the eyesight. But, of course, the commonest cause of blindness are defects in the eyes themselves or changes in the brain affecting the optic nerves. (*See under* "Eyes, Diseases of.")

A form of temporary blindness affects sometimes persons exposed to the prolonged glare of artificial light and one even speaks of an "electric-light blindness." We also speak of "snow-blindness" produced by exposure to the effect of strong sunlight upon snow. Of colour blindness I shall

have to say something under another heading. (*See also under* "Night-blindness," "Vision, Disorder of," etc.)

Now that we hear so much of malingering, it is as well to mention that there are several ways of finding out whether blindness is real or feigned. An experienced eye doctor will not easily be deceived.

Blisters **148**

A blister consists of an exudation of serous fluid between the layers of the skin. It is always safer to puncture a blister, to let the fluid out and to cover the part with an antiseptic bandage than to leave it alone. Otherwise there is a risk that microbes will set up inflammation which may turn into abscess.

Blisters which are not caused by injuries such as burns, but are more or less constitutional, require treatment by tonics and good feeding.

The term blister is also used for the agent by which one produces a blister artificially, for instance, cantharidin, glacial acetic acid, ammonia, etc. The object is generally to reduce inflammation. A flying blister means one which causes redness of the skin without raising a vesicle. It is usual to remove a blister after five or six hours, and to replace it by a warm linseed poultice, though occasionally it may be left on longer.

Blood, Diseases of the **149—152**

A few general remarks on the composition, etc., of the blood will be read with interest. The blood consists of a liquid portion called the plasma and corpuscular elements (visible under the microscope only) of which the principal are the red and white corpuscles. The former contain hæmoglobin which gives them the red colour and act as carriers of the oxygen necesary for the maintenance of health, so that if they are present in smaller numbers than normally the individual suffers from the effects of anæmia or chlorosis. The white corpuscles or leucocytes which are somewhat larger than the red, but much less in number, are regarded as the sentinels of the organism, for it appears that their object is to fight the various bacteria which invade the body and thus to avert disease. For this reason they are also called phagocytes, though this term is not used much now.

There are several kinds of leucocytes, but in a popular book like the present it is unnecessary to go into further details.

150. When blood coagulates—a process in which the fibrin and certain so-called platelets or plaques which it contains seem to play an important part—it divides into a yellowish liquid part and a solid red clot. The former goes by the name of serum.

Arterial blood is bright red in colour, venous dark red.

There are about 5 million red corpuscles (fewer in the blood of females) and from 5,000 to 10,000 leucocytes per cubic millimeter of normal blood. The blood-plaques are variously estimated at from 100,000 to 200,000 per cubic millimeter.

The total amount of blood in the body is calculated at 1-13th of the body weight. Healthy blood is reckoned to contain 78 per cent. of water and 22 per cent. solids. The red corpuscles when seen under the microscope look like rolls of coin. The white are seen individually and have various shapes.

An increase in the number of white corpuscles — leucocytosis — occurs in health as well as in disease. It is common during the process of digestion and also during pregnancy. The commonest diseases in which leucocytosis is present are certain forms of anæmia, including leukæmia, infectious fevers, cancer and conditions of blood poisoning.

151. Apart from its above-mentioned normal constituents the blood may contain abnormal substances, such as the parasites which give rise to diseases like malaria or various waste products in excess, for instance, urates and uric acid, the supposed causative agent of gout.

Much attention has been devoted recently to the subject of blood-pressure as a sign and cause of disease. The blood-pressure is ascertainable by an instrument called sphygmomanometer—something like a barometer in appearance. The normal blood-pressure is from 120 to 130 millimeters of mercury, though in persons over 50 years of age and in good health it is often from 140 to 160. A permanent pressure above 160 may be considered as high and therefore abnormal. A high blood-pressure is indicative of arterial disease and possibly also of disease of the heart or the kidneys. There are, however, people with a high blood-pressure of 180 or more who exhibit no signs whatever of these diseases. They are the individuals who are looked upon as "hard business men," they work hard, eat hard, and drink hard, and die eventually from the effects of arteriosclerosis.

A low blood-pressure of 120 and less is on the other hand compatible with good health, but it is frequently noticeable in persons of low general vitality or suffering from chronic wasting diseases.

152. The various diseases in which the blood participates will be found mentioned under their respective headings, but when there appears to be a general deterioration in the quality of the blood, as evidenced by outbreaks on the skin chiefly, tonics and "blood-purifiers" are sometimes of great assistance. One of the best known of the latter is Zittmann's decoction—a preparation of sarsaparilla and other ingredients—which may be taken in doses of from 3 to 6 ounces.

An important consideration as regards the purity or impurity of the blood is the state of the bowels. Many a person suffering from "blood-disorder" would be all the better by regular attention in this respect.

Blood-Spitting (Hæmoptysis) and Blood-Vomiting (Hæmatemesis) 153

For the purposes of first-aid it does not matter much whether the blood comes from the lungs or windpipe—in which case it is generally coughed up—or from the stomach in the form of vomiting. The patient must be put to bed at once and allowed to lie flat. Small lumps of ice should be placed in his mouth or if ice cannot be obtained he should be made to sip—not drink—cold water. He must not be disturbed or turned from one side to the other, and if food is given him at all it should consist only of cold milk administered with a teaspoon without making him sit up. He must not be allowed to talk.

Naturally one will send for the doctor immediately, for there is nothing which alarms the patient and his friends so much as the sight of blood coming through the mouth. The

doctor who knows his business will, however, on arrival do nothing more than see that the above measures are duly carried out and postpone the examination of the patient to another occasion when the hæmorrhage has ceased.

If the hæmorrhage is very alarming he may have to take additional steps to arrest it. Those depend upon the circumstances of each case.

It is not always an easy matter to tell whether the blood comes from the lungs or the stomach, but the chief means of distinction lies in the colour of the blood. That coming from the lungs is generally scarlet red and free from other substance. Blood from the stomach is more or less dark and mixed with particles of food.

It frequently happens that patients bleed slightly from the gums or the tonsils, and they run alarmed to the nearest doctor. Abstention from hot food for a few days and the use of an astringent mouth wash like well-diluted tincture of myrrh or diluted glycerine of tannic acid soon produce a cure.

The commonest causes of blood-spitting are tuberculosis, venous congestion, pneumonia, pleurisy, the rupture of an aneurysm, or an injury to the respiratory passages. Those of blood-vomiting are ulcer of the stomach, cancer of the stomach, and irritant poisoning. The treatment after the cessation of the hæmorrhage will therefore refer to that of the condition which caused it.

Blood-Vessels, Diseases of **154**

For practical purposes it may be said that there are two kinds of blood-vessels, arteries which bring oxygenated blood to the various parts of the body so as to nourish them, and veins which take the blood back to the heart and lungs in order that it may be freed of all waste matter and replenished with nutritious material, chiefly oxygen.

It is therefore clear that every part and organ of the body must have its arteries and veins which must moreover be in an efficient condition. But both arteries and veins are subject to disease, and when that is the case the parts which they supply are bound to suffer.

A result of arterial disease is, for instance, the bursting of an artery in the brain through chronic inflammation and degeneration, of venous disease ulcers caused by varicose veins.

There is one very serious disease of arteries which requires special mention as it occurs rather frequently and the term is often used, namely, aneurysm. It means dilation of an artery with consequent thinning of its walls so as to render it liable to rupture. The chief symptoms are a swelling, pain and pulsation, but as it is such a serious disease it is hardly necessary to dwell here at any length upon either its recognition or treatment. In the latter, rest is of the greatest importance.

Many sudden deaths are the result of an unsuspected aneurysm.

Phlebitis—which means inflammation of a vein—also occurs pretty often, when the large veins in the leg become affected, giving rise to the well-known disease which goes by the name of white leg (phlegmasia alba dolens). The symptoms are pain, reddening of the skin and hardening of the vein. The treatment consists in complete rest and the application of fomentations. Sometimes abscesses form, and surgical interference becomes necessary.

(*See also under* "Aorta," "Arteries," "Veins," etc.)

Blushing **155**

Medically speaking, blushing is a form of erythema or redness of the skin caused by dilatation of the superficial blood-vessels in consequence of emotion. Though one of the minor ailments to which mankind is subject, it is occasionally a cause of endless misery and even of suicide in highly neurotic individuals. The reason lies sometimes in the knowledge of a secret habit, at others in an emotional temperament. Curative measures, such as gymnastic exercises, reading aloud, singing and elocution lessons, electricity, psychotherapy, and so on, have the object of educating, so to speak, the nervous system into a better control of itself. Drugs and medicines are seldom of any use, but I must say I have seen good results from the use of potassium bromide and validol, the former in 5 or 10-grain doses two or three times daily, the latter in 10-minim doses either occasionally or once daily after the principal meal.

The more permanent flushes of the face of which some people, especially women, complain after meals are also forms of erythema, and are usually the result of indigestion or indulgence in alcohol. They also constitute one of the symptoms of the change of life. The treatment of these cases must therefore be directed to the removal or treatment of the cause. (*See also* "Shyness.")

Boils (Furuncles) **156—159**

Boils or furuncles are really small abscesses in the centre of which lies the core—a piece of gangrenous or dead tissue. Until the core has come out a boil will not heal.

Though a boil does not cause serious disturbance to the general health it sometimes gives rise to feverishness and headache. Very often also the nearest glands become swollen and painful, as they do in association with abscesses generally.

Nearly every doctor—professional and amateur—has his favourite method of treating boils in the early stage, but it must be admitted that in the vast majority of cases treatment or interference is of no use, and the boil takes its normal course. A well-known Manchester physician, now dead, who was much troubled with boils, used to say that he derived the greatest benefit from leaving them alone.

Still, it is possible occasionally to cut a boil short by pulling out the central hair or by touching the point of the boil with a match steeped in pure carbolic acid. This must be done with the greatest caution so as not to destroy a large surface of skin. Others recommend painting the boil with collodion. Where the pain is great a linseed-meal poultice or glycerine of belladonna applied over the boil will bring ease. Sometimes it is necessary to make an incision so as to relieve the tension.

157. "Blind boils" are boils which do not come to a head—or, as doctors say, to suppuration. These—and even suppurating boils at their early stages may best be treated by painting them with tincture of iodine or covering them with sticking plaster with the tip of the boil protruding through a circular opening in the plaster. Over this is placed a pad of cotton wool and bandage.

When the boil has come to a head and burst or been lanced, it should first be cleansed with warm boracic acid lotion and then covered with a piece of linen with some ichthyol

ointment spread on it. This should be changed twice daily until the core has come out. In this way one can prevent the formation of other boils around the first one.

Where boils come in crops, one after another, a condition spoken of as "furnunculosis," the first thing is to find out the predisposing cause. Sometimes it lies in diabetes, at others in a tendency to gout. Some people suffer from boils when eating more meat than usual, others when taking more sugar than is apparently good for them. Eggs also are often blamed for producing a crop of boils. Boils are sometimes the result of sewer-gas poisoning. In a good many cases a change of air or climate is succeeded by a crop of boils.

The next thing is to prevent irritation or chafing of the part by articles of dress, such as the collar or cuffs. A crop of boils on the back of the neck can easily be prevented by wearing a soft collar.

158. It should also be remembered that boils are produced (in those who are inclined to have them) by the action of microbes. These microbes get inoculated by friction of the skin. Therefore in drying oneself after washing, the towel should be applied on the skin lightly and not rubbed vigorously.

As regards diet, alcohol must be eschewed and meat should be eaten in moderation, if at all. It is best to avoid sugar, starches and sweets, and to use saccharin in the place of the former. The bowels must be attended to regularly, and this may be assisted by drinking twice daily a tablespoonful of yeast, stirred up in a glass of water, and taking at night-time one or two sulphur lozenges.

Some doctors are fond of prescribing onions, others yeast. I have seen good results from calcium sulphide taken internally in ½-grain tablets or powders twice daily, one hour after food, with some water. Arsenic is also very useful in some cases, but this should be taken only with a doctor's consent.

159. The recent introduction of the vaccine treatment in cases of furunculosis has shown good results, and quite a number of doctors employ now for the purpose an autogenous preparation made from bacteria derived from the patient's own boils. In obstinate cases which do not yield to other remedies the method deserves a trial. At the same time if there is such a cause as diabetes responsible for the boils, the other necessary measures must be adopted.

An iron tonic may be taken with advantage where the general health appears to be impaired.

The form of furunculosis prevalent in the East and on the shores of the Mediterranean, goes by many names, such as "Oriental Boil," "Aleppo Boil," "Delhi Boil," "Natal Sore," "Kandahar Sore," "Biskra Button," etc.

Bones, Diseases of **160**

The bones in the body are subject to numerous diseases. First there is inflammation, acute and chronic, either of the bone structure itself—known as ostitis or osteitis—or of the covering membrane only—periostitis. Children are very liable to both of these diseases, especially the tuberculous form. Then there is the condition known as rickets, which is an arrest in the growth and development of the bones leading to deformities. Sometimes the bones grow to abnormal dimensions, as for instance in acromegaly, or they develop tumours of one kind or another. Inflammation

of the bone-marrow is known as osteomyelitis. When inflammation of a bone leads to destruction of bone tissue the process is known as necrosis. Progressive softening of the bones is known as osteomalacia or mollities ossium. Caries is a condition in bones similar to ulceration in soft tissues. In the case of the spine caries is generally tuberculous, but we also speak of caries of the teeth. By "sequestrum" we understand a piece of dead bone resulting from disease, and "sequestrotomy" the operation by which such dead bone is removed. Most of these diseases are surgical in character and not in any way amenable to self-treatment. The simpler ones are treated by fresh air, sunshine, good food, cod-liver oil and iron tonics.

As to accidental injuries to bones, the commonest are fractures, and under the heading "First Aid" will be found some directions how to treat them. I may, however, state here that the difference between a "simple fracture" and a "compound fracture" —terms frequently used by doctors—is that in the former the skin over the broken bone is not opened, whilst in the latter there is an open wound which leads to the seat of the fracture.

When the two ends of a broken bone are brought together again—a process known as "setting a fracture"—a sort of beneficial inflammation results, the outcome of which is the formation of a sheath of hard bone round the seat of the fracture. This is called a "callus" and represents the manner in which the healing takes place. The time taken for a callus to form, and to harden so as to be like original bone varies from about three or four to six or eight weeks. By an X-ray examination it is now possible to ascertain whether a fracture is set properly.

In dealing with accidents where bones *may* have been broken it is best to assume that there *is* a fracture and to act accordingly.

Bow-Legs **161**

A condition characterised by an arching outward of the legs. It is generally one of the results of rickets, and though seen mostly in children who eventually get over the deformity, it persists occasionally through life. The treatment is by the application of mechanical apparatus which extends the legs and correct the curvature. In mild cases it is sufficient to bandage the legs firmly to one another with or without the aid of splints. More advanced or neglected cases, especially when the bones have become so hard as not to yield any longer, necessitate surgical operations followed by the wearing of plaster-of-Paris bandages. Bow-legged children should be discouraged from being on their feet, and should be kept in a recumbent position. Often this alone effects a cure. Daily massage and hot salt-water bathing are very helpful.

Brain, Diseases of the **162—165**

Apart from the diseases mentioned under "Apoplexy" the brain is subject to a number of others, including brain-fever, softening of the brain, and tumours of the brain.

Brain-fever is not a scientific term. It is a popular name for all feverish affections in which the brain appears to be implicated, and especially for that known technically as "meningitis." In meningitis it is not so much the brain itself which is inflamed, as the membrane covering it which is situated between the skull bones and the brain.

Tuberculous meningitis is a very serious illness from which many children die. It is one of the manifestations of tuberculosis, the condition brought about by a microbe called the tubercle bacillus. The first signs of tuberculous meningitis are rather vague and obscure. The child is irritable, suffers from headache, shows loss of appetite, and sleeps badly. Afterwards he begins to vomit, convulsions appear, the temperature is high, the pulse irregular and weak. This stage is succeeded by delirium and collapse. Death usually occurs in a week or two, sometimes in as many days. A fairly regular symptom of tuberculous meningitis is known as "tâche cérébrale"—the production of a red line when the finger nail is drawn across the skin of the forehead.

163. Other forms of meningitis arise from injuries to the head or from inflammation in one of the organs near the brain, like the ear. A chronic abscess in the ear is always a serious matter as there is the constant danger of the abscess extending to the brain and setting up meningitis.

The principal remedy in cases of meningitis is cold to the head in the form of ice-bags. The patient must be placed in a quiet and darkened room. It is usual for doctors to prescribe calomel in doses of from one to five grains in order to keep the bowels open. The mouth of the sufferer must be kept clean by repeated washing with a solution of potassium chlorate, one or two per cent. strong. Frequent sponging or bathing with lukewarm water adds to the comfort and keeps the temperature down. The recently adopted treatment of tuberculous meningitis by repeated lumbar puncture eases the pain but does not improve the chances of saving the patient's life.

Meningitis due to an abscess can be treated by operation only.

164. Softening of the brain is a term very much abused, for it is frequently employed to denote a purely mental deterioration, whereas in substance it is a physical alteration in the brain-tissue usually resulting from disease in the blood-vessels of the brain. The symptoms are gradually supervening paralysis — mental dullness, loss of memory, slight wandering, defective speech, and so on. The end is as a rule actual imbecility, unless a sudden apoplectic seizure ends fatally.

What is popularly called in many cases softening of the brain, is known by doctors as general paralysis of the insane.

The symptoms of tumour of the brain are not unlike those of softening. They are very slow and gradual, but headache is constant and persistent from the very commencement. Changes in the eyesight, vomiting and convulsions often accompany the headache. Some tumours of the brain can be located and then an operation presents what chances of success there may be.

165. Violent blows or falls upon the head with or without fracture of the skull-bones generally produce what is known as *concussion of the brain*, unless actual laceration of the brain substance with hæmorrhage occurs, when, of course, the symptoms mentioned in the previous paragraphs will make their appearance.

Otherwise the brain suffers a shaking which varies in degree. Mild forms may not show more than temporary giddiness accompanied by headache;

severer ones manifest themselves in prolonged insensibility.

The measures to be adopted when the patient is in a state of collapse are intended to re-establish the circulation in the brain. He should be placed in a position of rest and covered with plenty of blankets. Hot-water bottles should be applied all round him, and friction of the skin may be practised. A warm drink is advisable, but alcohol is best withheld. Smelling salts and other reviving measures may be administered.

It is generally regarded as a sign that the patient will recover if when consciousness begins to return, vomiting sets in.

On the other hand, continuance of the unconsciousness, signs of paralysis, and visible signs of actual injury on the scalp are presumable proofs that the brain has suffered laceration.

Sometimes the accident or injury results in compression of the brain by a portion of a fractured or depressed skull bone. In these cases removal of the bone to a larger or smaller extent by the operation known as trephining may save the patient's life.

Brassfounders' Ague 166

This is a disease very much like malaria seen in workers with brass. The attacks come on almost suddenly; they are ushered in by a feeling of general illness and then comes a stage of shivering cold followed by one of heat and profuse perspiration. All the time there is intense headache and pain in the back and limbs. The attack having passed away, the patient feels exhausted and weak, but he is generally able to return to his work.

Sometimes the illness resembles anæmia. The sufferer complains of indigestion, neuralgic pains, colicky pains, and constipation; he feels weak and nervous. A green line is generally to be seen on the teeth which is a sign that there has been some absorption of copper into the blood—brass consisting of copper and zinc.

There may be also other symptoms of a vague nature, such as headache, a dry cough, "sinking" sensations, itching, profuse sweating possibly of a greenish colour, a sallow complexion, etc., etc.

The treatment is more preventive than curative, but potassium iodide in 5 or 10-grain doses is the recognised remedy. The patient should at the same time drink plenty of milk.

In some cases the administration of diluted phosphoric acid in 15-minim doses two or three times daily acts very beneficially. If at all possible, the patient should change his occupation, or at any rate ask to be transferred to some other department of the works. Some persons seem to be more susceptible than others.

Breast, Diseases of 167—169

In addition to certain abnormalities, such as the presence of more than two breasts either in the usual locality or in other places, the absence of one or both organs, or an extraordinary size of one or both of them, the female breast is subject to a number of diseases of which the two most frequent are inflammation and cancer.

Inflammation of the breast or mastitis occurs as a rule in connection with child-birth and suckling, and it often ends in abscess. Much can be done to prevent it by keeping the breasts during lactation clean and properly supported, and also by using both breasts. On the first appearance of pain and inflammation the infant should be taken away from both

breasts, even if only one is affected, and the milk drawn off by the breast-pump. Glycerine of belladonna rubbed gently into the breasts diminishes the secretion of milk, and hot fomentations relieve the pain. If an abscess appears, an early incision is absolutely necessary.

168. Suckling mothers should remember that natural lactation is not painful and that pain is a sign of something being wrong. *Cracked nipples* should never be neglected, and until they are healed—frequent washing with boracic solution or a little glycerine is as a rule sufficient—the baby should not be applied to the affected breast which must be, however, relieved frequently with the breast-pump.

Cancer of the breast seldom attacks women less than 35 years old. The usual age is about 45 or 50. Of all cancerous diseases, that of the breast offers the best chances of complete recovery and a long life if treated early enough and thoroughly enough. Women cannot be warned too strongly to see a doctor as soon as possible after the appearance of a swelling or ulcer in the breast, especially if the nipple shows signs of drawing-in.

Besides cancer, the breast is also subject to other kinds of tumour, more or less serious in character, some of them, however, being perfectly harmless. There is also a neuralgia of the breast which is very painful; it is due as a rule to general ill-health or anæmia. (*See* "Neuralgia.")

169. In connection with diseases of the breast I may mention the condition known as flat chest or ill-developed bust, one which is frequently a source of annoyance and even unhappiness to women—especially those matrimonially inclined. The cause as a rule lies in the wearing of unsuitable corsets, though in many cases it forms part of a general constitutional thinness. The measures to be adopted for the correction of the deficiency consist in much sleep, or at least rest in bed, suitable exercises, especially those known as breathing exercises, loose clothing, a proper diet containing plenty of fat, and massage with or without olive—or some other—oil, in a circular manner.

The opposite condition, namely, an excessive bosom is part of general obesity, and can be combated in addition to dietetic precautions by suitable bandages and the help of a clever dressmaker.

Breath, Disagreeable (Foetor Oris) 170

A good many people suffer from this annoying complaint. Sometimes there appears to be no cause for it. Generally, however, there is a cause present which can be easily removed.

Among the chief of them is neglect to keep the teeth and mouth clean, or a decaying tooth. The treatment in such cases is obvious. (*See* "Pyorrhœa alveolaris.")

Constipation is a frequent source of a foul breath, and in some people indigestion has the same result. Some forms of bronchitis or lung disease are accompanied by the same symptom, especially if there is an abscess in the lungs.

Very often an abscess under a tooth or on or near the tonsils is the cause of the bad smell. Chronic catarrh of the nose and throat is also occasionally responsible for it. So is tobacco-smoking.

Apart from removing the cause, or when this is not possible, the disagreeable breath can be combated by the use of a lozenge, mouth-wash, gargle, or nose douche—allowing in the latter the

fluid to return by the mouth. One or other of the following will answer in most cases. A mouth-wash of thymol 7 grains, borax 15 grains, and distilled water one pint. A cheaper one is made out of permanganate of potassium one grain to the ounce of rose-water. A good formula is: Powdered caraway seed, powdered coriander seed and powdered cinnamon, half a drachm of each to one drachm of sugar, and enough acacia mucilage to make fifty pills. One to be dissolved in the mouth when necessary. For immediate use when nothing else is at hand a peppermint lozenge or some other scented sweet serves the purpose.

In fœtid bronchitis, inhalations of eucalyptus or creosote are useful remedies. In fœtid indigestion, the eating of charcoal biscuits after meals is to be recommended. Constipation must be avoided.

Bright's Disease **171**

Under this name are included a number of diseases of the kidneys, which have more or less in common the following symptoms: Presence of blood and albumen in the urine, dropsy, complication of the heart and general weakness.

Doctors speak of acute Bright's disease when the symptoms come on suddenly, the first being as a rule dropsy in the form of puffiness round the eyes. This is quickly followed by general dropsy and a great diminution in the amount of urine secreted. The urine at the same time presents a dirty brown colour, due to presence of blood..

Acute Bright's disease—which is also called *acute nephritis* or acute inflammation of the kidneys—frequently occurs after scarlet fever or diphtheria, especially in children, and also in the course of other infectious diseases, like enteric fever or pneumonia.

Some substances, taken internally, do occasionally produce acute Bright's disease. Chief among them are salicylic acid, carbolic acid, and turpentine. Alcohol may rarely have the same effect. The usual thing is for it, however, to cause the *chronic* form of *nephritis*, in which the symptoms make their appearance slowly and by degrees. They include besides the dropsy, shortness of breath, defects in the eyesight, headaches, etc.

171a. The usual treatment of Bright's disease is to keep the patient at rest and to prevent all irritation of the kidneys by withholding every kind of unsuitable food and drink, and by giving him nothing else but milk. At the same time measures are adopted to induce free perspiration so as to relieve the dropsy. This is generally done by vapour baths and drugs like jaborandi, which may be given in doses of from half to a teaspoonful of the tincture diluted in water, or sweet spirit of nitre in similar doses. In severer cases tincture of digitalis may be given in doses of 5 or 10 minims every four hours.

The bowels, too, are kept in a free state of purgation by such remedies as calomel or compound jalap powder.

As serious complications may occur at any moment or death ensue very rapidly from general blood poisoning—called in this case *uræmia*—medical care is absolutely necessary. There is also the danger that the acute Bright's disease will become chronic.

The treatment of the latter depends upon the circumstances of each case. As a rule, it is summed up in three items—diet, rest, and tonics.

Bright's disease, both acute and chronic, is often attributed to a chill

or cold, and in many instances the cause is a mystery. The chronic form is occasionally a part symptom of gout, lead-poisoning, or syphilis.

There were so many cases of acute nephritis in the Army during the Great War 1914-1918 that the term "War Nephritis" was adopted by the authorities. Investigation showed that the cause lay probably in a specific infection. The disease attacked mostly the troops in the front line.

Bromidism (Bromism) 172

A combination of symptoms resulting in some individuals from the prolonged taking of potassium (or other) bromide. They include headache, coldness in the hands and feet, weak action of the heart, somnolence, listlessness, loss of appetite, numbness of the palate or throat, a pale complexion and an eruption on the skin which is generally the first to appear in almost every case. Where the bromide has to be taken to keep epileptic fits in check bromism may to some extent be prevented by replacing at least one of the daily doses by an equal dose of borax. Otherwise the only remedy is suspension or abandonment of the drug.

Bronchitis 173—177

Bronchitis means inflammation of the bronchi, or of the air-tubes forming part of the lungs and situated in the chest. Its most frequent cause is exposure to wet and cold, or both together. It is generally accompanied by more or less inflammation of the windpipe and of the nasal passage.

Those who work under conditions which irritate the air-tubes, for instance, among dust or vapour, are peculiarly liable to attacks of bronchitis. Bronchitis also often follows other diseases such as influenza, measles, or whooping cough. Then there are numbers of people who for some reason or another are easily attacked by bronchitis, especially in the winter. It is well known that children and old people and those who are not in robust health often suffer in that way. Insufficient food and insanitary conditions are aggravating factors; that is why one sees so much bronchitis among the poor.

Bronchitis is one of the most frequent causes of death in nearly every community. It kills more people than cancer, and even more than consumption.

174. *Acute bronchitis*, called also *catarrhal bronchitis*, comes on more or less suddenly, or along with, a cold or other illness, the symptoms being feverishness and a cough. There is at first very little expectoration or phlegm, but it gradually increases in quantity. At the same time there is some hoarseness and much wheezing all over the chest.

In *chronic bronchitis* there is as a rule no feverishness, but the cough is very troublesome and the expectoration profuse, occasionally tinged witb blood. There is marked shortness of breath, especially at night. In the course of time there result emphysema and a dilatation of the bronchial tubes known as *bronchiectasis* and the expectoration becomes pus-like in character with a fœtid odour (fœtid bronchitis). In the so-called dry bronchitis of the old there is great difficulty in bringing up the phlegm. There is another form of chronic bronchitis called fibrinous or plastic, which consists in the expulsion of large membranes resembling casts of the bronchial tubes.

175. A patient with acute bronchitis requires the services of a doctor. Where these are not obtainable, he should be put to bed in a room with an equal temperature of about 60 or 65 degrees F., and sufficient ventilation. Linseed-meal poultices facilitate expectoration. They should be applied to the chest, both front and back. Inhalation of eucalyptus oil or Friar's balsam—a teaspoonful of either to a pint of boiling water—from a jug or inhaler will give great relief. It is also a good thing to have the room permeated with steam.

The following is a good mixture for children: Ipecacuanha wine 24m., vinegar of squills 48m., syrup of tolu 3dr., water to 2oz.; one teaspoonful every three or four hours. For adults the following two prescriptions will be found very useful: Ammonium carbonate 36gr., ipecacuanha wine 60m., infusion of senega 1½oz., chloroform water to 6oz.; one tablespoonful three times a day after meals; or, Ammon. carbon. 60gr., compound tincture of camphor 2dr., syrup of squills 3dr., syrup of tolu 6dr., infusion of senega to 6oz.; one tablespoonful three times a day after food. One may suit some people better than the other.

If the patient is constipated the treatment should commence with a good purge, for which a dose of castor oil is eminently suitable. Free perspiration may be induced by the application of hot-water bottles to the feet or a hot foot-bath and a drink of hot lemonade. The diet should be of the liquid kind only. If the temperature is high it may be necessary to give one or two doses of quinine or other such drug.

In the case of children suffering from bronchitis it is well to remember that they usually swallow the expectoration, which may be the cause of vomiting and diarrhœa.

176. The treatment of chronic bronchitis is more difficult and should be to a large extent preventive. Undue exposure to cold and wet or to irritating substances, such as are often associated with one's employment, must be avoided. Those who can afford it or whose arrangements permit it should live in a warm climate, at any rate during the winter months. They should be well clothed when the weather is severe. The diet should contain plenty of fat or be supplemented by cod-liver oil with or without malt, petroleum emulsion, and so on.

For internal administration the prescriptions given above may be tried occasionally rather than regularly. If the cough is very distressing, codein or heroin, both opium preparations, may be taken cautiously—always understood, with a doctor's consent by preference—in doses of one-twentieth of a grain to one-sixth of a grain in the case of the latter, and of half a grain to one grain in the case of the former, two or three times daily. A useful formula in this respect is the following: Codein sulphate 4gr., elixir of orange 3dr., solution of potassium citrate to make 3oz. One of two teaspoonfuls every three or four hours.

177. Where there is difficulty in bringing up the phlegm the following potassium iodide mixture may be taken short of allowing it to produce symptoms of iodism: Potassium iodide 1dr., syrup of senega 1oz., glycerine 3dr., water to make 3oz. To be taken in two teasponfoul doses one hour after meals.

For such cases, and in fœtid bronchitis especially, inhalations of creosote are also useful. A mixture of beechwood creosote and eucalyptus oil, a drachm of each, to two ounces of Friar's balsam may be added in teaspoonful quantities to a pint of boiling water and inhaled morning and evening. After inhalations the patient should remain indoors at least an hour or two. Inhalations of turpentine vapour are also to be recommended. At the same time turpentine oil may be taken internally, preferably in 5m. terebene capsules.

The question of alcohol in regard to bronchitis does not admit of a general answer. On the whole it is better that it should be abstained from, but some patients require a little stimulation and then it may be permitted with due caution and in reasonable quantities.

Bruises **178**

Bruises are slight lacerations of the tissues under the skin resulting from blows or other injuries. They are best treated in the early stages by cold applications supplemented if necessary by the addition of lead lotion or laudanum to the lint or bandage employed. Tincture of arnica is with some people a favourite application to bruises and contusions. If not treated quite from the beginning it is preferable to use the remedies warmed and to apply a little firm pressure.

Bubo **179**

A bubo is an inflamed, enlarged, and generally painful gland in the region of the groins. It is important to remember that buboes may arise in connection with simple injuries or irritation in the neighbourhood of the affected glands or even some distance away, for instance in the foot. This also happens as a complication of boils.

The treatment of bubo is that of the original disease. A simple bubo will disappear when the cause of it has disappeared. Its subsidence may be hastened by painting with tincture of iodine. If an abscess forms, the best thing is to have it lanced at once rather than foment and wait for it to burst. The phagedænic ulcer requires surgical help.

Sometimes the glands remain enlarged though the disease which caused them has gone, and the acute pain has disappeared. If they produce no inconvenience they may be left alone. Otherwise it may become necessary to remove them by operation, if painting with iodine and pressure by pad and bandage give no satisfactory results.

Bunion **180**

A bunion results from inflammation on the ball of the great toe, with a certain amount of dislocation in the joint causing the toe to assume a more or less horizontal position. Technically it is an inflammation and thickening of the bursa or sac-like small cavity situated between the parts of the joint. The usual cause of a bunion is pressure from ill-fitting boots, as evidenced by the circumstance that it is generally accompanied by a well-developed corn. A frequent result of a bunion is that the second toe becomes hammer-shaped. Occasionally the bunion ends in an abscess. The condition in a number of cases begins during childhood and grows worse as time goes on.

The treatment of bunion consists in wearing boots with straight inner borders and square or rounded toes; the deformity must be constantly corrected by manipulation and supplemented by the wearing of fingered stockings. Or splints and special

bandages should be applied for the night or constant wear. As a rule these measures suffice to effect a cure, but where the neglect has been exceptional, a surgical operation may become necessary. The latter consists in a division of ligaments or removal of one of the bones. The thickening and inflammation may be reduced by painting with tincture of iodine or by the application of flying blisters. If an abscess has formed, it must be treated in the ordinary way.

There are bootmakers who make a speciality of boots for those who are troubled with bunions.

Burns and Scalds 181

Injuries caused by fire, hot liquids, electricity, acids, etc., are divided into three stages. The first, the mildest degree, is called that of congestion. The application of cold bandages is as a rule sufficient in this stage. If not it may be supplemented by the use of picric acid gauze in suitable strips, or picric acid wool. In children this first stage of a burn or scald, if at all extensive, may have serious consequences, and if about two-thirds of the surface of the body are involved, the issue is generally fatal.

Burns and scalds of the second degree are those in which blisters have developed. They are considered very serious when the chest and abdomen are affected. The blisters should be pricked carefully and with antiseptic precautions, so that their contents of serum may be liberated, but the skin should be left. After that the injured part should be dusted with aristol or some similar sedative dusting powder, and covered with cotton wool and bandaged. Instead of powders, some prefer to use an ointment of picric acid, aristol, or cycloform. Others have more faith in one of the oils—such as carron oil (equal parts of linseed oil and lime water), etc.

In the third degree where sloughs and loss of substance have resulted, the former must be carefully separated and the parts antiseptically cleansed. Skilled medical attention is essential so as to prevent deformities as far as possible. It may even be necessary to amputate gangrenous limbs to save the life of the sufferer.

Where the burn or scald is accompanied by severe shock or collapse the necessary measures must be taken without delay. Stimulants and artificial wamth must be provided, and if the pain is severe, opium or morphia are fully permissible.

During the stage of convalescence, complications must be guarded against, the diet must be carefully regulated, and rest in bed is of prime importance. Thirst is best relieved by barley water or milk and soda.

Where a burning accident has ended fatally it may be an interesting point whether the victim was burned to death or has died from suffocation and been burnt afterwards. The general test is that burns after death do not produce real blisters. They leave no red base, and they contain gas instead of liquid serum. (*See also under* "First Aid.")

Cachexia 182

A term which means a low state of vitality accompanied by loss of flesh and a muddy or brownish complexion, generally the result of some serious chronic disease, like cancer. The form of malaria known as malarial cachexia is characterised by anæmia, emaciation and enlargement of the spleen.

Caisson Disease **183**

This disease, also spoken of as compressed air illness, which has become rather more frequent than it used to be on account of modern building methods necessitating work under increased atmospheric pressure, occurs mostly in divers, tunnel and underground labourers, caisson-workers, etc. The symptoms are of the paralytic kind, including loss of sensation and loss of power chiefly in the legs, but occasionally an attack comes on suddenly in the form of an apoplectic seizure. A certain warning may be experienced in the shape of headache, pains in the limbs, known as "bends," singing in the ears or sore throat, nose-bleeding, giddiness, and slight unconsciousness. The cause of the illness is not known though it is supposed that it has some connection with an increase in the blood pressure.

As it has been observed that many cases occur only after the return of the worker to the ordinary atmosphere, the conclusion has been drawn that sudden changes from high pressure air to ordinary air and long continued work in the former must be avoided as far as possible. Certain classes of people, for instance those who incline to obesity or arteriosclerosis, should not choose this form of employment.

At well-regulated works they have proper decompression chambers for the workers to remain in previous to leaving. In fact, if the patient is seen immediately after the beginning of the illness "re-compression" is the best applicable remedy. For the rest, the symptoms named above are treated according to their occurrence and severity.

Calory **184**

In reckoning the food-value of a certain article as a producer of heat one takes as a basis the calory—an arbitrary measure which denotes the amount of heat required to raise the temperature of one kilogram of water by one degree centigrade. Thus for instance one ounce of fat beef is said to represent about 150 calories, one ounce of bread about 100 calories, one ounce of cheese about 30 or 40 calories, one ounce of cabbage about 8 calories, one ounce of sugar about 120 calories, and so on. It has been calculated that an average adult individual requires per day food representing from 3,000 to 4,000 calories. But whereas a person leading a sedentary life may manage on as little as 2,000 to 3,000 calories, a manual labourer needs as much as 6,000 or more.

Cancer **185—189**

Cancer is a sort of abnormal growth of tissue which is apparently governed by what are known as freaks of nature, and though we may in the end succeed in discovering its ultimate cause, it does not by any means follow that we shall be in a position to prevent it.

The parasitic theory of cancer is still shared by many observers, but the particular microbe which gives rise to it, aided by other factors no doubt, still remains undiscovered.

The following items of information on the subject of cancer will be read with interest.

186. Cancer is spoken of as a *malignant* tumour, because, if unchecked, it tends to destroy life through sheer exhaustion of the sufferer. Other tumours are called *benign*, or innocent, because they are not directly endangering life.

In the proper sense of the word cancer is not regarded as contagious

or catching, although it sometimes happens that both husband and wife suffer from it. There are also in existence so-called "cancer-houses," the inhabitants of which appear to suffer from cancer successively, especially in rural districts.

On the other hand, cancer is the disease in which heredity plays a more important part than in any other. The heredity seems to assert itself more in the female members of the families.

187. Cancer is very rare indeed in people under 45 years of age. The usual age at which cancer begins is between 45 and 55 in women, and between 55 and 65 in men. Now and then cases of cancer occur in children of tender years.

More women suffer from cancer than men.

Rich people suffer in proportionately larger numbers than the poor. Perhaps this is due to the circumstance that they eat more animal food. On the other hand the opinion is entertained in countries where horseflesh is eaten that this acts as a preventive of cancer.

It has, however, been frequently asserted that cancer may be checked or prevented altogether by a vegetarian diet and simultaneous abstention from tea and coffee.

Constant irritation of a part may lead to its being attacked eventually by cancer. There is a familiar example in the frequency of cancer of the lip in smokers, especially in those who smoke a pipe.

There are several kinds of cancer in the sense that they look different when portions of them are examined under the microscope. Technically they go by the names of adenoma, epithelioma, carcinoma, sarcoma, etc. The two latter are the most frequent, the first being more common in older, the second in younger people.

188. The sooner a case of cancer comes under the observation of a doctor and the sooner it is decided to have recourse to the surgeon's knife, the more promising the chances of prolonging the life of the patient.

There certainly are other methods of treatment which some doctors favour. They include the X-rays, radium, mesothorium, and other modern inventions and discoveries. But it may safely be said that the cure for cancer in a general sense is not yet within our reach, and that the knife is the only really reliable remedy—provided it is not applied when too late.

In certain superficial forms of cancer, especially that known as rodent ulcer, which appears frequently near the outside corners of the eyes, radium achieves good results, as do also the X-rays, but as regards deeper structures, the successes so far are not of sufficiently long duration to justify a very hopeful view.

Radium may, of course, be of benefit also in inoperable cases for the relief of pain and other symptoms, though even in this respect it is hazardous to express a definite opinion.

189. Among other recent remedies employed in cancer with—according to their advocates—more or less satisfactory results may be named injections of fœtal or embryonic tissue, liquid extract of taraxacum, known popularly as dandelion, various vaccines, uranium (a possible substitute for radium or mesothorium) and a number of others. I cannot take notice here of the many claims of so-called cancer curers who do not make public the nature or composition of their remedies. By this I do

not necessarily mean that they are all fraudulent impostors, though a good many are. In fact, I happen to know that some of them are perfectly sincere, and that in some individual cases they have actually done good. These cases may not, however, have been cancer at all or they may in the end have recovered spontaneously, as it occasionally happens that cancer remains stationary or undergoes a cure without any treatment whatever. (For details as to cancer of the various organs, see under the names of the latter.)

Carbo-Hydrates, Proteids, and Fats 190

In speaking of diet or of diseases in which diet is an important part of the treatment, doctors often use the expression "carbo-hydrates." Used in this sense, it means articles of food which contain starch in considerable proportions and belong, as a rule, to the vegetable kingdom. For instance, bread consists of about 50 per cent. carbo-hydrates, 40 per cent. of water, and the rest proteids and other substances. Flour contains about 70 per cent. carbo-hydrates, rice more than 80 per cent., oatmeal more than 60 per cent., peas more than 50 per cent., potatoes about 25 per cent., and sugar nearly 100 per cent.

Proteids, on the other hand, are substances of which the most important chemical constituent is nitrogen in various combinations. The chief examples of proteids are all animal foods, including milk, eggs, meat, etc. Vegetables contain proteids in smaller quantities.

Fats form the third group of foods, there being two kinds of fat, one derived from the animal and the other from the vegetable kingdom. Butter is an illustration of the first, olive oil of the second. Of late, petroleum, purified and rendered digestible, has become an important dietetic and medicinal article. It is, of course, a fat derived from the mineral kingdom.

Carbolic Acid 191

As it is frequently employed for the purpose of suicide, and as carbolic acid is often also swallowed by mistake, I mention it here specially. (*See* "Poisons and Antidotes.") If no stomach-pump is at hand, do not rely on emetics. Give large quantities of oil, white of egg, or plenty of milk and water. Give also Epsom salts—about a tablespoonful in warm water.

If the stomach is washed out by means of the pump, it must be introduced with the greatest care. Artificial heat must be applied and, if necessary, also artificial respiration. Alcoholic stimulants may be given freely.

The most characteristic signs of carbolic-acid poisoning are the unmistakable smell and the white patches on the lips and mouth.

Carbolic acid — chemically also called phenol—in prescribed quantities is a frequently employed antiseptic, and it is also used as a remedy both internally and externally. The latter method includes dressings, inhalations, sprays, injections into the skin, and other forms. Probably less than one ounce of carbolic acid is sufficient to cause death, the fatal period lasting from an hour upwards. This shows how important it is to handle it carefully, and it should never be kept in an ordinary bottle but in one of special shape or colour so as to avoid taking it in mistake for something else, an accident which happens too often.

I ought also to mention that unduly prolonged application to the skin of carbolic acid dressings may cause gangrene as well as general blood poisoning.

Carbonic Acid **192**

Carbonic acid gas acts as a poison under various circumstances In the form of choke-damp it contaminates the air of mines, pits or cellars. It is the gas which causes all the evil effects of a badly-ventilated room. It frequently causes death in breweries by escaping from vats in which fermentation is going on. The vapour of charcoal or coke may have the same result, though in this case as well as in the accidental or suicidal deaths from ordinary illuminating gas the fatal effects proceed more from carbonic oxide than carbonic acid.

The symptoms are fullness in the head, giddiness, drowsiness, palpitation of the heart, and insensibility.

The treatment should be directed more to prevention than cure, but if the occasion demands it the remedies applicable are fresh air, cold water to the head, artificial respiration, and blood-letting.

The artificial respiration should be kept up for at least an hour, and if the heart shows signs of stopping, a few sharp quick blows in its region will sometimes restart its action.

In the form of "snow" or solid "crayons" obtained by "evaporation" of liquid carbonic acid at a temperature of 110 degrees F. below zero the substance is now employed for the treatment of various affections of the skin, such as warts, nævi and birthmarks, moles, and other blemishes. It is also used extensively in cases of lupus, hæmorrhoids, rodent ulcer, obstinate sores, etc., sometimes with highly satisfactory results.

Carbonic acid gas is now used very much as an addition to baths, especially in cases of heart disease.

Carbuncle **193**

A carbuncle is really a very large boil, so that what has been said about boils applies in a larger measure to carbuncles, except that surgical aid becomes absolutely necessary. It is usual to open a carbuncle by means of a cross-shaped incision so as to let out as much of the matter at once as possible, the reason being that otherwise blood-poisoning may result. As it is, a carbuncle is generally accompanied by feverishness, much more than a boil, and by general prostration.

After recovering from a carbuncle, the patient as a rule requires a change of air, tonics, and very good nourishment.

Carbuncles, like boils, may be indicative of the presence of diabetes. In old and feeble persons, carbuncles occur pretty frequently without any perceptible reason, except that they are an easier prey to the microbes which produce the disease.

The usual seat of a carbuncle is either the neck or the back, between the shoulders. (*See* "Boils.")

Cardioptosis **194**

A condition, frequently congenital, in which the heart is situated at a lower level than normally. It may exist without causing any symptoms of ill-health or it may result from actual disease of the heart. In the former case no treatment is required; in the latter it will depend on the causative agency.

Carminatives **195**

These are remedies which relieve

flatulence and colic, especially in children. They also act as stimulants in mental and physical exhaustion. The following is a useful prescription for a carminative, to be used, however, cautiously, so as to avoid acquisition of the drug habit. Aromatic spirit of ammonia, 2dr.; spirit of ether 3dr.; tincture of orange sufficient to make up 3oz. Teaspoonful doses in children; tablespoonful doses in adults every three or four hours. Other carminatives are tincture of cardamon, tincture of ginger, horseradish, peppermint, etc.

Cartilages, Diseases of **196**

There are a number of cartilages in the body, their function being to give pliability to the parts concerned. The costal cartilages, for instance, favour the expansion of the chest. The thyroid cartilage (or Adam's apple) and other cartilages of the larynx and trachea give elasticity to the windpipe. Articular cartilages form the union between bones constituting the joints. All bones are formed from cartilage, the substance known popularly as gristle. The principal diseases to which the cartilages are subject are inflammation, ossification, and tumours. The first forms a part symptom of rheumatic diseases. The second which results in the cartilages becoming as hard as bone is an affection of old age. Inflammation and other causes occasionally produce disintegration of a joint, thus giving rise to what are known as loose bodies. Sometimes cartilages which form part of a joint become displaced and cause considerable pain. We have a familiar example in the dislocation of the semilunar cartilage in the knee-joint. The cartilage forming the outer ear and the knuckle-joints becomes occasionally the seat of "chalkstones" as part of a general gouty condtion. These "chalkstones" are known as "tophi." (*See also under* "Joints, Diseases of.")

Catalepsy **197**

This is a condition which is really seen oftener on the stage or described in novels than in actual life. It cannot, however, be denied, that it exists. It is a symptom of hysteria, and arises from a deranged condition of the nervous system. The patient seems to lack every power of voluntary movement, and will remain either entirely or partially in any position he is placed, the muscles being perfectly rigid.

The condition, as is well known, can also be induced by hypnotism, though the impossible attitudes witnessed in stage performances are usually well rehearsed and arranged beforehand.

A genuine case of catalepsy is best left alone as long as there is no apparent danger, but a pinch of snuff or the application of an electric current may end the attack at once.

Malingering can be detected by the fact that limbs placed in awkward positions remain in them longer than the law of gravitation permits. Attach a weight to the extended arm, and if it does not fall, or begin to fall, immediately, the catalepsy is feigned and the supposed victim an impostor. Cataleptic attacks occur occasionally in connection with epilepsy. Treatment of the condition during the free intervals is to be carried out on lines adopted in hysteria generally. (*See under* "Trance.")

Cataract **198**

By cataract we mean complete or partial opacity of the lens of the eye, in consequence of which no light can

pass through it. It is generally a sign of coming old age, though cataract is seen occasionally in young persons, particularly after accidental injuries to the eye.

Cataract is often hereditary in families. Some occupations which require stooping and close work, or exposure to a strong light are a frequent contributory cause. Gout, kidney disease, and diabetes are often accompanied by cataract.

What the sufferers complain of most is dimness of vision, like that experienced in a fog, especially for distant objects. Occasionally they also complain of pain and spots before the eyes.

The treatment must, of course, be left to the discretion of the eye-surgeon. It consists, as a rule, of removal of the lens followed by the prescription of suitable spectacles.

The operation is generally postponed until the cataract is "ripe," which means hard enough to be removed. As frequently a cataract becomes stationary for considerable periods it is not uncommon for the operation to be abandoned or suspended, especially if only one eye is affected and the sight of the other is fairly good. It is also customary to desist from an operation when the patient is generally in a poor state of health or if the eyes are affected also in some other way.

Much can be done in the way of preventing cataract from progressing rapidly by avoiding as much as possible close work and the reading of small type and by putting the least amount of strain on the eyes.

Catarrh, Acute **199**

The word "catarrh" means inflammation of any mucous membrane—the latter term meaning the covering skin of internal cavities—so that we have catarrh of the mouth, nose, windpipe, stomach, intestines, bladder, etc. In practice, however, the designation "catarrh" is used only with reference to the respiratory passages, and when it is used by itself, it means catarrh of the nose and of the throat.

Acute catarrh—or what is popularly known as "*cold in the head*," and technicaly also as coryza or acute rhinitis—hardly needs an elaborate description. Its symptoms are familiar to everybody. It begins with sneezing and dryness of the nostrils, there is hoarseness, some headache, chilliness, and general discomfort. Then there begins a sticky discharge which stops up the nose and interferes with breathing, causing also singing in the ears. It is very often possible to cut an attack short by a hot bath, a hot drink of milk and barley water and a good sweat. But in most cases it takes its course, lasting about a week or ten days, and nothing will stop it. However, a few drops of ipecacuanha wine in a little water or half a teaspoonful of paregoric, also diluted, will relieve the cough. Ferrier's snuff up to about a couple of drachms in the course of 24 hours is also a useful remedy. Or the nose may be douched with a 1 per cent. solution of carbolic acid. With some doctors a favourite remedy for acute catarrh is the application to the nostrils, as high up as can be reached, of a mixture of menthol, four grains to the ounce of liquid vaseline. A simpler method is to draw up from the palm of the hand once or twice daily a solution of ammonium chloride—one per cent.

Internally, medicine is seldom necessary; but a tonic of iron and

quinine after the third or fourth day is frequently of assistance. The following will be found a useful formula: Sulphate of quinine 24gr., tincture of perchloride of iron 60m., sulphate of magnesia 60gr., chloroform water to 6oz.; one tablespoonful every three hours. To be taken preferably through a straw so as to avoid blackening of the teeth.

Some persons and households are more susceptible than others to recurrent "colds in the head," which suggests that the illness is of a microbic and infectious nature, though the specific microbe has not yet been ascertained. Vaccine treatment especially as a preventive against recurring attacks is now often applied with success.

If at all possible, a sufferer from a severe cold in the head should stay at home for the first day or two in order to avoid complications of the deeper respiratory organs. (*See* "Influenza.")

Catarrh, Chronic 200

Chronic catarrh—spoken of also as chronic rhinitis—gives sometimes a great deal of trouble and lasts a very long time. It affects nearly all the upper respiratory organs, the nose, back of the throat, larynx, and windpipe. It extends into the tubes which connect the ears with the back of the throat and which are known as "Eustachian tubes." The breathing is much interfered with, largely through the formation of crusts in the nostrils, there is a constant dropping of mucus into the back of of the throat, the voice becomes husky, and there is more or less discharge from the nose, often of a very disagreeable odour. The patient also complains, as a rule, of loss of smell and taste. The hearing, too, is affected. Chronic catarrh may be a continuation of the acute variety or it may be due to such causes as irritating vapours, or particles of dust, more or less constant exposure to wet and cold, etc.

The treatment is pretty much the same as that of the acute form, but it must be carried out persistently for a long time. Syringing the nostrils, and gargling with an antiseptic, like carbolic acid—1 per cent. solution, or boracic acid—2 or 3 per cent., or lysol—2 per cent.—are to be recommended. After the nostrils have been cleansed with one of these solutions, benefit may be obtained from the use of the following mixture as a spray: Eucalyptol and menthol, 1 grain of each to the ounce of liquid vaseline. (*See also under* "Nose, Diseases of.")

Both acute and chronic catarrh have been treated of late with vaccines prepared from various bacteria, but the results can hardly be described as striking.

Sometimes scraping of the inside of the nose or other surgical interference becomes necessary. In the case of children much benefit is derived from cod-liver oil.

There is a form of chronic catarrh which consists of a number of acute colds following one another in more or less rapid succession, the principal symptoms being an almost constant running from the nose, headaches, and hoarseness. In these cases the cause must be looked for and it will generally be found in some sort of irritation, or, in the case of children, in adenoids.

This habit of constantly catching cold can be combated, in addition to the remedies named above, by

breathing exercises and suitable hygienic precautions, including a reasonable mode of dress.

Cauterization 201

Cauterization means destruction of tissue by burning it with a so-called caustic substance. It is employed chiefly for the removal of unhealthy growths, or to prevent the further introduction of poison into the blood circulation after a bite or other accident. Very rarely it is also used to check hæmorrhage from a bleeding wound.

The principal caustic agents are the various acids—(carbolic, nitric, hydochloric, sulphuric, chromic, and glacial acetic)—caustic potash pencils, silver nitrate crystals or rods—(well known under the name of lunar caustic)—the galvano-cautery—(which is employed in the treatment known as electrolysis for the removal of nævi and superfluous hairs)—the thermo-cautery—(which the heat supplied from a spirit lamp is applied by means of a platinum wire)—and—in emergencies—the red hot iron.

Many so-called cancer-curers use a paste containing arsenic, which is a strong caustic agent.

Cerebellum, Diseases of 202

The *cerebellum* (or small brain) is the part of the brain which is situated behind and underneath the *cerebrum* or large brain. It is liable to such diseases as abscess, tumours, and hæmorrhage, the chief symptom of cerebellar disease being a disorder of the equilibrium, the patient being dizzy and unable to balance himself. Along with this there are headaches and vomiting bouts, as well as disturbances of the eyesight. The only possible treatment of cerebellar disease lies in the chance of a surgical operation.

Cerebro Spinal Meningitis 203

There have been several small epidemics of this fatal disease in various parts of England during recent years. It is also known by the names of cerebro-spinal fever, spotted fever, malignant purpuric fever, and petechial fever. The disease is an infectious one, and due to a microbe. Its symptoms are high temperature, intense pain and rigidity at the back of the neck and in the head as well as in the limbs, convulsions, delirium, and a rash on the skin. It generally affects children, the infection taking place as a rule through the medium of "carriers" (*see under* "Enteric Fever"), who harbour the microbes in their upper respiratory passages. The duration of the disease is very variable.

The treatment is not unlike that of other fevers. Rest in bed, liquid diet, ice bags to the head. Lumbar puncture and liberation of fluid from the spinal cord are sometimes resorted to, but most cases are now treated by injections of serum prepared from the meningococcus (the microbe which causes the disease), and the results are certainly more satisfactory, the very high mortality having been considerably reduced since this method has come into use.

In times of epidemic, in many places a form of vaccination with a similar serum is now practised as a preventive.

In a number of cases where the patients survive they remain permanently blind, paralysed or otherwise crippled.

The severe epidemic during the great war, which started first among the troops and which claimed many victims, was supposed to have been brought to

Europe by the Canadians. By isolating and disinfecting the "carriers" it was possible to check many threatened outbreaks.

Chalazeon **204**

A small swelling in the eyelid distinguished from a stye by being situated away from the edge and the eyelashes, and more towards the centre. It arises from closure of the duct of one of the glands known as Meibomian. The treatment consists in removal of the little tumour.

Chapped Hands and Skin **205**

Many people suffer from chapped or cracked hands, especially in cold weather, or if they happen to put them very often in cold water. The treatment consists in keeping the skin dry as much as possible and in protecting it against the raw atmosphere. This can be done by wearing suitable gloves, both day and night. Where it is inconvenient to adopt this method, a good plan is to anoint the hands every night with pure oil, to cover them with oil-skin, and bandage.

In milder cases frequent inunction with glycerine and rose-water, hazeline cream or hazeline snow, is sufficient. No ordinary soap should be used, as it is apt to keep up the irritation. The hands should be washed with lukewarm oatmeal water, or if a soap is used it should be of the superfatted variety. These preventive measures may be used by those who incline to have chapped hands on the least provocation.

What has been said applies also to "cracked lips," of which some persons complain in the winter time, though frequently this ailment of the lips is one of the complications of indigestion or due to excessive smoking or some other irritation.

Chest, Deformities of the **206**

The most frequent deformities of the chest are those due to tuberculosis and rickets. A typical tuberculous chest is long and flat, the ribs are oblique, the shoulder-blades project out like wings, and it is evident that the breathing capacity is diminished.

The commonest deformity as a result of rickets is the "pigeon breast" or pigeon-shaped chest, the breast bone being very prominent and the sides of the chest flattened. In addition there are to be felt on the ribs a series of prominences or bead-like swellings to which the name of "rachitic rosary" has been given.

"The barrel-shaped chest" which is rounder than the normal, and which moves when breathing like a solid piece, is usually the result of emphysema. The shoulders are bent and rounded and the individual concerned is always out of breath.

The deformity of the chest is sometimes apparent only, being as a matter of fact the result of humpback or tuberculous spine disease.

Temporary deformities of the chest may be caused by pleurisy, the effusion (or liquid in the chest) causing it to bulge out in one place more than in others. Such a bulging may also be caused by aortic aneurysm.

Chest, Pains in the **207**

The following are the commonest diseases, accompanied by, or causative of, pain in the chest, and they will be found described under their respective headings; neuralgia, muscular rheumatism, herpes zoster (shingles), pleurisy, aneurysm, bronchitis, heart disease, indigestion, angina pectoris, consumption.

Chest, Regions of the **208**

The front part of the chest is sub-divided into the following regions: supra-clavicular (above the collar-bone), infra-clavicular (below the collar-bone), mammary (round the nipple), infra-mammary (below the nipple), upper sternal (round the top of the breast bone), and lower sternal (round the bottom of the breast-bone). There are, of course, two of each, with the exception of the last two.

The back of the chest is sub-divided into scapular, infra-scapular and inter-scapular regions. The first covers each of the shoulder-bones, the second, the part under each, and the third, the part between the two.

The sides of the chest are divided into axillary and infra-axillary regions. The former is under the arm-pit, the latter underneath it.

Cheyne-Stokes' Phenomenon **209**

This, called also Cheyne-Stokes' respiration, is a form of irregular breathing seen, as a rule, in the last stages of heart disease, kidney diseases, or affections of the brain. Its characteristics are periodical rapid and deep respirations, followed by slow breathing and then a pause in which the respiration seems to have ceased altogether. The phenomenon is occasionally observed in acute intoxications.

Chickenpox **210**

A contagious disease—technically known as Varicella—which takes from ten to twenty days, the average being fifteen, from the date of the infection to make its appearance in the form of an eruption of the skin. It generally attacks children only, and the same individual is seldom attacked more than once.

At the beginning of the illness chickenpox looks like a mild attack of smallpox, but the absence of pain in the back is an almost sure sign of chickenpox. The eruption which takes the form of variously-sized pimples or blisters does not always appear first in the same place; it is seen sometimes first on the face, at others on the chest or arms. The constitutional disturbance is very slight. The disease lasts about a fortnight.

Nothing much in the way of treatment is required, except isolation and occasionally rest in bed. To relieve the severe itching a lotion of carbolic acid, 1 or 2 per cent, strong, or carbolised vaseline, may be employed, and the child should be warned not to scratch, as scratching may leave marks on the skin. The child should not be sent back to school until all the scabs —including those on the head—have disappeared completely. Chickenpox need not be notified to the medical officer of health except when special instructions to that effect exist during epidemics of smallpox, when mistakes are liable to occur.

Sometimes chickenpox is apt to leave rather serious consequences behind, especially in delicate children, hence the necessity of caution, it being always a safer plan to err on the safe side.

It is as well to know that in rare cases chickenpox does attack adults.

Chiggers **211**

Chiggers, jiggers or chigoes are a variety of sand-fleas, present in large numbers in tropical countries, including the West Indies, Central America, and Central Africa, and

their bites may give rise to serious complications. In addition to preventive, disinfecting measures, those subject to the risk of being attacked should always wear shoes or boots, the feet being generally the parts which get bitten oftenest. If the parasite is seen in the skin it should be removed with the aid of a sterilised needle, and the part infected touched with turpentine.

Chilblains **212**

Chilblains are a sign of impaired circulation or of anæmia and are seen more frequently in girls than in boys. They are caused by exposure to cold and damp. As a rule, they occur on the fingers and toes, but they are also seen sometimes on the nose and ears. In severe cases the skin becomes dusky and breaks, leaving a raw surface. Chilblains are generally accompanied by more or less itching.

The way to treat or prevent chilblains from going worse is to keep the hands and feet warm by wearing woollen gloves and socks, and comfortable boots. Dry friction, with or without a flesh-glove, so as to improve the circulation in the parts, is very useful. Exercise, such as walking, or skipping, has the same effect. An ointment of ichlhyol 30 per cent. strong in lanolin is a good application. Unbroken chilblains may be treated by the application of tincture of iodine or cocaine and collodion. When broken, boracic acid ointment or ointment of Peru balsam is very soothing and facilitates healing. At the same time it is advisable to give internally cod-liver oil and an iron tonic, or Blaud's pills, with or without arsenic. In a number of cases a course of calcium lactate is of decided benefit. It should be taken in ten-grain doses three times daily for two or three days at a time in syrup of orange or some other flavouring mixture. After a few day's interval, it may again be taken for two or three days, and so on. The food should be nourishing and generous in quantity.

Electric foot-baths are a good form of stimulation of the circulation in the feet. On the other hand it is wrong to warm chilblains in front of the fire. The iodine preparation known as iodex has recently come much into use as a remedy against chilblains. It does not stain like ordinary tincture of iodine.

Chills (Rigors) **213**

A chill is a sensation of cold accompanied or not by shivering. Whilst most chills are the result of exposure to cold or wet, they sometimes are the first symptom of a more serious disease like pneumonia or malaria. The usual treatment of a chill is by the application of warmth in some form—hot-water bottles, a hot bath, a hot drink, plenty of blankets, etc.

Chills down the back, coming on at odd times and without any apparent cause, are a frequent symptom of neurasthenia. The best way to treat them is by a drink of warm water or milk.

Cholera **214**

In a book of this kind it is hardly necessary to say much about so rare a disease as cholera. The occasional cases imported from abroad are soon detected by the medical officers of health, and all precautions are adopted to prevent an epidemic. The chief symptoms of the disease (the proper name of which is "Asiatic cholera," to

distinguish it from the severe cholera-like cases of diarrhœa, which go by the name of "English cholera" or "cholera nostras") are violent vomiting and purging (the discharges having the characteristic appearance of rice-water), cramps, and most alarming collapse, with a fatal tendency.

Cholera is one of the most infectious diseases known, and the danger of infection lies in coming into contact with the evacuations of a sufferer from cholera, or through drinking water which has become contaminated by such evacuations.

The microbe which produces cholera is called "comma bacillus," and was one of the first microbes to be discovered. A lymph—similar to that used in vaccination—is prepared from these microbes and inoculated, as a prevention against catching cholera, in countries where the disease is very prevalent, as for instance, India.

Readers of this book will scarcely ever be in the position of having to treat themselves or others for cholera without the aid of a doctor. But it may just be mentioned that in the first stages of the illness opium is the drug mostly to be relied upon. It may be given in the form of laudanum in frequent doses of half a teaspoonful in order to check the purging. In the stage of collapse the patient is to be kept warm and mustard poultices may be applied to the abdomen.

Cholera is now treated very much by antitoxic serums or vaccines prepared from cholera bacilli. The method of treating convalescent patients, and also those in an actual attack by injections into the skin of large quantities of saline solution to make up for the quantity of fluid lost by the body and giving at the same time large draughts of a dilute solution of potassium permanganate (1:5000) is now resorted to with good results.

Where one is subject to the risk of being attacked by cholera, it is wise not to drink water or milk which has not previously been boiled.

Chorea **215—218**

Chorea or *St. Vitus' Dance*, is an affection of the nervous system, present, as a rule, in children between the ages of 5 and 16, mostly girls. Rarely it is also seen in older females, and a form of it, which may be very severe, accompanies sometimes the state of pregnancy.

In some cases chorea appears to succeed an attack of rheumatism, in others one of scarlet fever. There is also some association between chorea and heart disease, and between chorea and anæmia. But, as a rule, there is a history of some shock or fright as the cause of the illness. A tendency to chorea is to same extent herditary, and it is also in a sense infectious from a desire to imitate.

The distinguishing symptom of chorea is a succession of involuntary spasmodic muscular movements in various parts of the body, from the face down to the arms and legs, and carried out without any purpose whatever. They may vary from slight twitches to most violent jerks, so that all voluntary actions, such as feeding, or putting out the tongue, become impossible.

216. Parents often make the mistake of punishing children suffering from chorea. This is utterly wrong, as the patients cannot control the movements. The only way to cure them is to put them to bed and to keep them as quiet as possible. The diet should consist of milk mainly, tea and coffee not being permitted. Electricity and

massage are very beneficial. Arsenic is a favourite drug with doctors in the treatment of chorea. It is given in 2 or 3 minim doses of the liquor arsenicalis three times daily after food, or in the form of a course of mild Levico water. Medical supervision is, however, desirable, especially as there may be serious complications. Most cases recover, an attack lasting generally from two to six weeks.

It is interesting to mention that chorea is often a result of defective eyesight, and when several attacks occur in quick succession a suitable pair of glasses may effect an immediate cure. Worms, too, have been known to be the cause of obstinate attacks of chorea.

217. Chorea is very prevalent in France, and they have recently treated there a number of cases by lumbar puncture and injection of magnesium sulphate into the spinal cord membranes. This would appear to be, however, too heroic a remedy for a disease which generally gets better sooner or later by much simpler methods.

The name of St. Vitus' Dance has arisen from a belief prevalent in the middle ages that a pilgrimage to the shrine of St. Vitus, the patron-saint of dancers, was a safe cure for the dancing mania with which many sufferers were afflicted.

There is a form of chorea seen in elderly people, but it is with them a habit rather than a disease. Sometimes, however, it may give rise to much discomfort, and occasionally it is rather serious, as it interferes with one's employment. The form known as "Huntingdon's chorea" is accompanied by signs of paralysis and dementia. Self-control is much aided in these conditions by watching the movements through a looking-glass.

218. Children and young people exhibit sometimes slight choreic movements, known as "Habit spasms," such as shrugging the shoulders, twitching the corners of the mouth, and so on. The best thing is to take no notice of them, but as the cause frequently lies in overstrain, mental or physical, this should be corrected without drawing much attention to the peculiar movements.

Chorea must not be mixed up with hysteria, although occasionally the latter succeeds the former, but the name "chorea major" has been given to the form of hysteria characterised by dancing, and ecstatic movements during religious excitement, and at "revivalist" meetings.

Christian Science 219

I must say here a few words on this method of treating disease. It is to all intents and purposes a form of faith-healing which is in itself a variety of suggestion or auto-suggestion. There can be no denying that the power of the mind over the body is great, and there must be a belief that good will result from the treatment adopted, no matter what it is like, if it is to serve any useful purpose. An ordinary bottle of medicine will help to restore impaired health if the patient thinks it will do so, but if he takes it as an experiment and doubting its efficacy, the chances are that he will derive no benefit whatever. Hence the many successes claimed by Christian Scientists and other faith-curers, some of which are unquestionably genuine. On the other hand, it is foolish to trust in this form of treatment when conditions are present which demand active medical or surgical inter-

ference. Medically, this is expressed in the sentence that functional diseases unaccompanied by organic lesions are amenable to mental forms of treatment, but of no use in actual organic disturbances. Hysteria is an instance of the former, valvular heart disease, of the latter.

Cinchonism **220**

By this we mean a combination of symptoms which result from a prolonged use of quinine—or even, in some persons who are particularly susceptible, after a few doses only. It includes palpitation, buzzing in the ears, headache, nose-bleeding, deafness, eruptions on the skin and more or less pronounced blindness. The only remedy is to discontinue at once the taking of the drug, when the symptoms will gradually disappear. It is claimed for some preparations, or artificial substitutes of quinine, for instance euquinine, that they do not give rise to cinchonism. In milder cases of susceptibility to the drug, only one or two of the above-named symptoms may show themselves, the commonest being singing in the ears and deafness.

Circulation, Diseases of the **221**

Disorders of the blood circulation are generally the result of affections of the heart or of the blood-vessels, and they will be found described under various headings. Whether the circulation takes place regularly or not is ascertained by the pulse. Local defects in the circulation take the form of cold hands and feet, or a cold nose or ears, a further stage being the condition known as chilblains and frost-bites, or that known as "dead fingers," which may lead to Raynaud's disease.

We speak of local anæmia when the circulation is impeded in some particular part of the body through disease or spasm of the blood-vessels or for some other reason, say obstruction by some article of dress.

On the other hand, we say that a part is hyperæmic or congested when it has too much blood through stagnation in the circulation. When this hyperæmia is general all over the body and the individual concerned is also said to be making too much blood, the condition is called plethora, though this term is not used much now. An example of local hyperæmia we have in acne rosacea. It is clear by what I have said that the treatment of disorders of the circulation must deal with their causes.

Cleft Palate **222**

This is a condition arising from imperfect development of the bones which form the roof of the mouth. The cleft may be complete along the whole roof of the mouth or partial and affecting only the soft palate which lies in front of the uvula, the prominent hanging-down structure at the back of the mouth. Frequently, but not always, cleft palate is accompanied by a similar split in the lips known as hare-lip and which may be either single or double. Breast-fed infants with cleft palate must be fed either in the erect position or else by means of a teaspoon passed well to the back of the mouth. Where the child is fed artificially the feeding bottle must have a specially long teat.

The correction of the cleft palate can only be effected by one or more surgical operations, the questions being only when the operation should take place. Some surgeons prefer to do it at once, others prefer to wait as long as six months or more. Some surgeons

perform the operation in the summer months only, some do it in one sitting, others in several. Often the operation is only partially successful and then the deficiency has to be made up by wearing a false palate.

A cleft palate should be suspected in an infant if it does not take its food in a natural, easy manner, or if the food comes back through the nose. An inspection will soon reveal the defect.

In later life a cleft palate if left untreated, or if the operation was unsuccessful, shows itself in faulty speech and articulation, a nasal twang and a liability to repeated "colds in the head."

Climate, Treatment by 223—225

A good many diseases can be, if not cured permanently and completely, at least materially relieved, by residence for longer or shorter periods in places where the climate is suitable. Though it is exceedingly difficult to lay down general rules, each case having to be decided largely on its own individual merits, the following are a few hints which will be found useful under appropriate circumstances.

Broadly speaking the climate of the East Coast of Great Britain is colder and drier than that of the West and South Coasts. In Europe generally the climate is cooler and moister on the West coasts than on the shores of the Mediterranean. Therefore, the East and South-East of Great Britain and the Northern coasts of Europe are more suitable for invalids during the summer months; the South, West, and South-West more for the winter months.

Nervous and neurasthenic patients should choose a bracing rather than a warm climate. Those troubled with insomnia of the nervous kind benefit much in the neighbourhood of pine-woods. Neurotic persons subject to neuralgias are as a rule better off away from the sea.

Sufferers from chronic affections of the chest and throat may choose a locality in the South of England between Dover and Penzance. Further away they have the alternatives between the Riviera (South of France and Italy) and Upper Egypt. Still further, they may select either South Africa, Australia, or Southern California.

224. For consumptives in the early stages, the climate of high altitudes is generally found to answer best. Davos, in Switzerland, is well known in this respect. To the same category belong the South African Highlands in the Cape Colony and Transvaal, the State of Colorado, and New Mexico in the United States. In more advanced stages warmer climates suit better than cold, and then one should choose a place near the Mediterranean, or, if foreign travel is impracticable, on the South Coast of England.

Rheumatic patients are generally best away from the seaside, and they should always choose, if possible, a warm and dry place rather than one that is cold and damp.

Those with chronic heart disease do better in low—or at any rate—moderately high localities—with plenty of sunshine. Warm, dry climates are also preferable for those suffering from chronic kidney troubles. In England, Brighton and Ventnor enjoy a high reputation in diseases of this kind.

225. The seaside is generally beneficial in the case of children suffering from the effects of rickets and anæmia, and the East Coast, particularly Cromer, seems to answer admirably in this respect.

I must, however, conclude these few observations by calling attention to a precaution which is too often neglected, and in many instances with deplorable results. A change of climate, desirable though it may be, should never be effected unless it can be accompanied by what one may describe as "home comforts." If it is a question of choosing between remaining at home under comfortable circumstances and with an easy mind and undertaking a fatiguing journey to the healthiest possible place where one will miss the many little amenities which go to make life pleasant and endurable, there should not be the least hesitation in deciding in favour of the former alternative. A second or third best climate, where the patient can have plenty of fresh air, and receive all the attention he needs will often be of far greater service than the place with the most ideal climate, but where he will be obliged to forego little necessities or luxuries to which he is accustomed or eat food which he cannot digest.

Clubbed Fingers (Hippocratic Fingers) 226

This is really a symptom of other diseases, specially of the lungs and heart, rather than a disease in itself, but occasionally it is seen in healthy individuals. The ends of the fingers—and sometimes of the toes — are flattened or club-shaped, and the nails curved towards the palms. The condition cannot be altered by any method of treatment, but is not as such of any serious importance.

Club-Foot 227

This is a distortion of the bones of the foot produced by contraction of one or more muscles or tendons, and it gives rise to various kinds of deformity. It may be either congenital, in which case it is often hereditary, or it may be the result of infantile paralysis. In those cases in which treatment can do any good, recourse must he had partly to the surgeon's knife and partly to mechanical supports and appliances.

There are several varieties of club-foot which is technically known as "talipes." In talipes calcaneus, the patient walks on the heel alone. In talipes equinus, the heel is elevated and all the weight is thrown on the sole and toes. In talipes valgus, the foot is turned outwards, and in talipes varus, it is turned inwards. One can generally tell which variety it is by the way the sole of the boot is worn out. In some cases, there is a combination of two or more of these deformities.

Rarely similar deformities are present in the hand, when the condition is spoken of as "club-hand."

Cocaine 228

This drug is well known for its beneficial qualities as a pain-killer and as a local anæsthetic, but it is also known for the ease with which people who have recourse to it acquire the cocaine habit. The latter manifests itself by insomnia and general depression, decay of intellectual activity and sense of morality, steady emaciation and physical exhaustion. The only way to overcome the cocaine habit, as will be mentioned also under another heading dealing with the drug habit in general, is suitable institutional treatment.

Coccygodynia 229

This is one of the most frequent causes of backache, especially in women, being a form of neuralgia

produced by the stretching or dislocation, during childbirth, of the coccyx, the extremity of the spinal column. The condition may also result from an injury, and it may also form part of a general state of gout or rheumatism. It is said to be frequent in jockeys and others who do a lot of riding on horseback. The pain is felt chiefly when sitting down or rising from a recumbent position, also during walking and at stool.

Rest in the lateral position and the use of suppositories of opium or belladonna will bring relief in a number of cases, in others warm hip-baths with some mustard added are effective, in others again, surgical operations become necessary. In any case, however, attention to the bowels is essential, as constipation undoubtedly aggravates the complaint.

Cold, Effects of **230**

Short exposure to cold is stimulating and exhilarating, but when continued it depresses the vital functions and impairs the circulation in particular. Much depends on the robustness of the individual, some people tolerating cold more readily than others. Dry cold is less injurious than cold accompanied by damp. Rheumatism is a common result of prolonged exposure to cold and wet, and so is Bright's disease. Of local conditions resulting from cold, chilblains and frost-bite are the commonest. They are mentioned under their respective headings.

In withdrawing a frost-bitten person from the cold atmosphere, warmth should be applied carefully and not suddenly; in fact, many recommend beginning the friction with ice-cold water. Alcohol is best withheld or given in smallest quantities only. Beef tea of gradually increasing temperature is preferable. (*See also under* "First Aid.")

Cold in the form of baths, douches, ice-bags, the cold pack, sponging, etc., is very much employed in medical practice especially for reducing the temperature in cases of fever. As to the "cold morning tub," many persons employ it who should not do so, and many cases of rheumatism are made worse by the practice. It should only be followed by those who are robust and in excellent health.

Colic **231**

By colic we understand sharp pains of a paroxysmal character in the abdomen, chiefly round the navel, that is, the pains may abate or cease altogether for a while and then start again. Pressure generally brings relief, especially if there is flatulence present. The most frequent are the intestinal colic and the colic from gall-stones.

The intestinal form is, as a rule, produced by indigestible or putrid food. In children it is frequently brought about by an excessive quantity of food. Colic is, in many cases, the result of a strong purgative. On the other hand, it is sometimes accompanied by long constipation as, for instance, in chronic lead poisoning.

Several other conditions, mechanical or inflammatory, give rise to pain resembling colic. Of the first variety, strangulated hernia is a familiar example; of the second, appendicitis.

Great caution is required in treating a case of colic—or what looks like colic. One is tempted to give in all cases a purgative medicine, but whilst this would be the proper thing in a case of intestinal colic due to an

indigestible or irritating substance, it might even cause death or serious injury in a case of strangulated hernia or appendicitis.

The safer course is, therefore—unless there is no doubt whatever as to the case being one of intestinal irritation—to apply hot fomentations and to give opium until the arrival of the doctor.

The colic of infants being usually caused by some mistake in the feeding will best be combated by correcting the same. An enema of warm water with some bicarbonate of soda added to it—say half-a-teapsoonful to about 4 ounces—will often bring immediate relief. This should be supplemented by the application of hot fomentations. From half to a teaspoonful of a mixture of lime water and compound tincture of cardamom in equal parts may be given every half-hour to children subject to flatulent colic.

As to the colic due to the several affections named above, *see under* the respective headings.

Colitis, Mucous **232**

Mucous colitis is a peculiar form of inflammation of the bowel, which appears to be much on the increase. It is seen especially in women of neurasthenic or nervous disposition, and the symptoms are periodical pains in the abdomen accompanied either by constipation or diarrhœa, and the discharge from the bowel of large masses of mucous sometimes having the shape of tubes. Occasionally there is also a discharge of a little blood. The condition is rather intractable and difficult to cure. It may last for many years and resist every treatment. The latter consists as a rule in attention to the general health, prevention of constipation, a proper and regulated diet, the wearing of an abdominal bandage, suitable exercise and a course of massage. Small doses of castor oil help in discharging the mucous masses, the presence of which accounts for the abdominal pain. In addition, hot fomentations should be applied. In severer cases, during the attacks, rest in bed is recommended. The most beneficial drug appears to be bismuth carbonate in teaspoonful doses suspended in mucilage, three or four times daily. High injections into the bowels of a solution consisting of 10 grains borax to the pint of warm water are sometimes of great benefit and should be tried. Of recent years the so-called "Plombières treatment," copied from that well-known French watering place, has been much practised and is now obtainable at almost every British and foreign Spa, and it is claimed that it is so far the best cure for mucous colitis. In numerous cases the condition is arrested entirely by psychotherapeutic treatment of the neurasthenia, of which it is one of the symptoms.

Collapse **233**

We speak of collapse or a state of collapse when there is extreme depression in the vital functions and inability to stand upright. There is failure in the circulation as manifested by a weak pulse, which is almost imperceptible. Instances of collapse we have after severe hæmorrhage or a severe shock, and in such illnesses as cholera. The patient should be placed at once in the recumbent position, heat should be applied and stimulants administered. Hot milk and coffee act excellently.

Colles' Fracture **234**

This is one of the commonest fractures, being that of the radius, the

outer of the two bones which form the lower arm. The fracture is situated near the wrist, the hand is displaced backwards and outwards. The accident is generally caused by a fall on the palm of the hand, and occurs frequently in skaters. One can almost diagnose a Colles' fracture at a glance from the way the patient holds the broken forearm in the other hand. The treatment is, of course, by splints and bandages.

Collodion **235**

This well-known dressing for wounds and abrasions is made of gun-cotton dissolved in alcohol and ether. It is used as a substitute for ordinary adhesive plaster, and is much more waterproof than the latter. Flexible collodion is an improved preparation containing in addition 5 per cent. Canada balsam and 3 per cent. castor oil. Styptic collodion, used in arresting bleeding from wounds contains an astringent, generally tannic acid.

Coma **236**

A patient is said to be in coma or comatose when he is profoundly unconscious and he cannot be awakened by external stimulation. He is apparently in a deep sleep, the breathing is stertorous or laboured, and he snores very loudly. He may or may not pass excretions involuntarily. Coma being generally the result of some disease, it will be found mentioned under different headings. There is the alcoholic coma, th apoplectic coma, the diabetic coma, the uræmic coma, the coma due to some acute poisoning, such as opium or belladonna, etc. Coma may or may not be accompanied by convulsions.

The treatment depends on the cause, but cold applications to the head are nearly always indicated, with mustard poultices or hot water bottles to the back, abdomen, and legs.

The form of coma known as coma-vigil in which the unconsciousness is only partial or at any rate not complete, the patient lying with his eyes more or less always open and muttering deliriously, is a bad omen in chronic diseases, for instance, delirium tremens, or in some acute illnesses, for instance, typhoid fever, as it denotes the approaching end. A quick pulse is usually an accompaniment of coma-vigil.

Complexion **237**

The complexion of an individual is often a valuable indication as to his or her state of health. Thus a ruddy complexion, such as is seen in people leading an active out-door life, is an unfailing sign of good health, whilst a pale and thin complexion is always present in delicate and anæmic persons. The transparent complexion of consumptives accompanied by the so-called "hectic flushes" of the cheeks frequently forms the first suspicious symptom.

The drunkard's complexion is well known by its redness and thickness of the skin, and so is the jaundiced complexion of sufferers from liver-disease. The bronzed complexion in Addison's disease has already been mentioned. A dark grey and almost black complexion is often the result of long treatment, internally or externally, with nitrate of silver.

Mention must also be made of the freckled complexion of fair and red-haired people—which is constitutional and of no serious importance.

A pale complexion is common in night workers or in those who are little in the sunshine. On the other hand, when the complexion becomes suddenly

pale in a person who has always had a good colour, it must be regarded as a warning that there is something wrong, suspicion being directed in the first instance to the kidneys.

A rough complexion may be improved by the use of sulphur ointment and washing with oatmeal water. At the same time sulphur lozenges should be taken internally at night time to combat the constipation which is perhaps the commonest cause of a bad complexion.

What is often enough called a bad complexion is nothing but insufficient use of soap and water. *Verb. sap.*

Congestion **238**

This word means an accumulation—or excess—of blood in a particular part, and is really the commencement of a state of inflammation. Sometimes, however, congestion subsides without inflammation supervening. This happens especially as regards the brain, which organ is now and then the seat of slight congestion. The result is a severe headache. The treatment consists of cold applications to the head, a hot footbath and a dose of aperient medicine.

Consciousness, Loss of **239**

This may be partial or complete. In the former there is a more or less constant desire to sleep with periods of consciousness in between. Such a form is seen, for instance, in senile dementia. Then there is the partial unconsciousness of such conditions as somnambulism or hypnotism in which the patient retains the power of muscular action.

Loss of consciousness is, however, as a rule complete, and occurs under various circumstances. Thus it is one of the symptoms of apoplexy. It is part of a fainting fit. It is one of the signs of asphyxia, produced by various poisons, including opium. Insensibility is one of the results of drunkenness or alcoholic intoxication. It is one of the late symptoms of Bright's disease and of diabetes, being part of the condition described under coma.

The consciousness is gone in an epileptic attack, and in hysterical seizures, as well as in other diseases of the nervous system. On the whole, however, it may be said that the most frequent cause of complete and lasting loss of consciousness is an apoplectic attack. The treatment of unconsciousness is mentioned under the headings of the various conditions of which it forms part.

Constipation **240—245**

Constipation is so frequent a complaint that there are hardly any people who do not suffer from it at some time or other. Many are subject to it permanently, and others contribute to its presence by carelessness or neglect. In some cases, as for instance in young girls, constipation is brought about by a false sense of modesty and by omission to respond to nature's call. In others, the absence of the necessary conveniences or economic considerations due for instance to the nature of one's employment, have the same result.

To a very large extent constipation is prevalent in our days owing to the more refined food we consume. We eat more concentrated and less bulky substances than was formerly the case, the consequence being that there is an absence of mechanical irritation in the interior of the bowels which is necessary to stimulate their action. This is the explanation of the aperient effect of vegetables and fruit. They act as intestinal irritants. And so

does all food of a coarse nature, as, for instance, black bread and raw meat.

241. Another frequent cause of constipation is insufficient consumption of liquid, especially water. Tea, which contains tannic acid and is therefore an astringent substance, contributes to constipation, and in many women there is no other cause of the latter than an excessive consumption of tea. Freshly made tea does not contain so much tannin as tea which has been stewing for some time, and is therefore preferable for this as for other reasons.

Sedentary occupation and absence of sufficient exercise—especially in the open air—are further causes of constipation, and from this point of view one cannot but regard the enormous advance in the means of locomotion of our large cities. Very few people now walk to or from their work; the cheap train or electric car takes them to their destination quickly and comfortably. They spend most of the day in ill-ventilated offices or factories, with the result that they become constipated in addition to being subject to other physical ailments. In country places, where people have no other methods of travelling than their own natural organs, constipation is practically unknown in those whose work causes them to walk long distances.

Constipation is also one of the results of insufficient mastication of food. In children it is occasionally the result of over-feeding.

It only remains to mention that constipation is one of the symptoms of many acute diseases and of some chronic complaints.

242. That hæmorrhoids are a common result of constipation is well known. To the same class of effects one may add a coated tongue, a disagreeable breath, absence of appetite, flatulence, biliousness, and even jaundice or an abnormal appearance of the urine which leaves on standing large deposits.

More remote effects of constipation are a more or less constant headache, flushes of the face, dizziness, palpitation, general lassitude, and sometimes wasting. In fact, constipation is responsible for a very large number of the ills to which the human flesh is liable.

243. By what has been said above, much can be done to relieve constipation by attention to hygienic details and by the adoption of the necessary precautions. The treatment of constipation by aperient and purgative drugs is in so far unsatisfactory as it tends to become a permanent necessity.

Still, it is one of the unavoidable evils of our age, and so we must make the best of it. The first rule is to avoid drastic purgatives in chronic constipation. It is better to use the milder ones, to begin with. These include the various saline natural mineral waters (or the salts extracted from them), such as Friedrichsall, Carlsbad, Hunyadi Janos, Apenta, etc. The usual dose is about a wine-glassful before breakfast. The artificially-prepared Epsom and Glauber salts make very effective substitutes.

As to the numerous laxative drugs, it is hardly necessary to give a full list of them. They are all well known, and in selecting one in preference to others, it is generally a question of personal choice. Of late cascara has become a favourite remedy. It has the advantage that it does not require a constant increase in the dose taken. About half a teaspoonful of the liquid

extract of cascara, combined with a little syrup of ginger, and taken at bedtime is a pleasant way of taking it, or it may be given in tabloid form. Still more recently, purified paraffin has come into much use against constipation. It may be taken either in the aromatic form or plain—in doses of from one to four teaspoonfuls every evening. (*See also under* "Enema.")

244. In the constipation of children, carbonate of magnesia, from 5 to 20 grains, given in a little milk, is of the greatest service. Sulphur lozenges at bed-time also answer very well. In more obstinate cases, recourse may be had to enemata of soap and water, or soap suppositories. The former should not be used for a long time without interruption. If necessary, the injection of a little glycerine may be tried for a change.

One of the most important considerations in chronic constipation is the question of diet. Concentrated foods, such as eggs or milk, should be avoided or partaken of in moderation. As already indicated, articles containing much water and cellulose, as, for instance, the coarser vegetables, are serviceable. Brown or wholemeal bread is preferable to white, and new bread is better avoided altogether. In fact, the coarser and harder the bread, the better, and the more one eats of it the more will the constipation diminish. Toast with plenty of butter or dripping is to be recommended. The same thing may be said of porridge with sugar and a little milk. Those who like them may eat onions in abundance—provided they can keep away from other people on account of the unpleasant odour they give to the breath. All kinds of fruit are good against constipation, either raw or stewed. No objection to meat of any sort, except perhaps veal or pork. Tea, if taken at all, should be weak and freshly made, and it should never be drunk when eating meat. Intoxicants are bad, especially where there is a tendency to hæmorrhoids, though in some people a glass of beer acts as an excellent aperient. Water, either plain or as barley water, should be drunk in large quantities, and this plan may be adopted in the case of children with much benefit.

245. Among other exercises suitable for the relief of constipation may be mentioned skipping, from which I have seen occasionally very good results, especially in young girls. It is well known that many golfers find in their favourite exercise a convenient method of combating both their gout and constipation—a common combination. Where exercises are impracticable ordinary massage may be tried as a substitute.

Perhaps I should mention that several more or less fancy remedies against constipation have been recommended in recent years, from subcutaneous injections of salt-water and other substances, to the administration of glandular extracts. But they will hardly become popular chiefly on account of their being very expensive, and most sufferers will have to choose one of the old-fashioned purgatives.

Constitutional Diseases 246

By this term we understand diseases which are more or less inherent in the individual concerned owing to qualities inherited from ancestors or in consequence of some peculiarity in the build of the body. In a more restricted sense, a constitutional disease is one by which the entire organism is effected, not only one or two special organs.

This is, however, an arbitrary definition since as a matter of fact very few diseases are confined in their effects to particular parts only.

Consumption (Phthisis) 247—254

Though it must be admitted that the mortality from consumption is steadily declining, chiefly owing to the open-air method of treatment, it is nevertheless a fact that consumption still kills more people than most other two or three diseases put together. It is calculated that one-seventh of mankind suffer from consumption.

Many theories which were held on the subject of consumption are now exploded. Thus, for instance, we no longer believe in the hereditary character of the disease. It has been proved over and over again that if the children of consumptive parents are removed away from them and placed in healthy surroundings, they grow up free from every sign of consumption.

Secondly, there can be no doubt now that consumption is a curable disease, especially if treatment is commenced early enough. The danger lies in the illness remaining unrecognised until the constitution has become seriously undermined and the vital forces have lost their recuperative faculty. It is for this reason that it is useless to wait for a cure of consumption which shall benefit every case no matter to what stage it belongs. There always will be people dying from consumption in diminishing numbers, of course—because there always will be cases in which treatment will come too late. Human nature will have to undergo a vast change for it not to be subject to this probability.

247a. There is no reason, however, why the number of such cases should not only diminish, but become almost insignificant, and much can be done in attaining that object by educating the vast mass of the people on the means by which consumption can be prevented or checked in its early stage, especially since it is now a notifiable disease.

To begin with, not sufficient stress can be laid on the fact that consumption is a preventable disease. It is an infectious disease. It is a disease caused by microbes which are perfectly well known as "tubercle bacilli." Hence the name "tuberculosis," of which consumption—or pulmonary tuberculosis—is one of the varieties. (*See* "Tuberculosis.") All that is therefore necessary is to adopt such measures as to make these microbes innocuous. There is one chief, and perhaps only one, medium through which the microbes do all the mischief they are capable of, and that is the expectoration of persons suffering from consumption. The way in which the process takes place is as follows:—

A patient who has consumption expectorates a great deal of phlegm. Every particle of this phlegm contains thousands of microbes of the kind which give rise to consumption. As long as they remain mixed up in the phlegm they do no harm, but when the fluid part of the latter evaporates and the microbes along with the other solids remain behind in the shape of dust, they are raised by the movements of the air, thus becoming mixed with it and liable to be inhaled by the people in the immediate vicinity. These, if they happen to be in delicate health or inclined to consumption—and some people seem to possess the inclination quite apart from heredity—upon inhaling the microbes develop the disease, and then in their turn they

infect others in the way they have been infected themslves.

248. The obvious moral of what has been stated is that consumption can be prevented by the proper disposal of the expectoration of consumptives. Under no circumstances should it be allowed to accumulate or remain on floors, walls, or wherever it may have a chance of becoming dry. It should either go down into the sewers or else be burnt. The latter method is preferable. Every expectorating consumptive should have a number of small rags with him into which he may expectorate, and they should be thrown into the fire as soon as possible. Or else he should expectorate into pocket-spittoons containing some disinfectant solution and have them emptied at frequent intervals.

As there are many people who are consumptive without knowing it, or without this being known to others, it is a good thing that all expectorations should be treated in the same way, and there is much to recommend the crusade against promiscuous expectoration, carried on by medical officers of health in most of our large towns.

249. The subject of milk in relation to consumption has recently formed a matter of controversy, and in spite of the assertions of eminent investigators that milk is never a cause of consumption, medical opinion still favours the theory that unless there is absolutely no suspicion of tuberculosis—and very rarely can this be said to be the case—milk should never be consumed, or at any rate given to children, without having been previously sterilized, not necessarily by boiling, but by heating to a temperature of 60 or 70 degrees centigrade (about 150 degrees Fahrenheit), a process known as pasteurization. The reason is that tuberculosis is very prevalent among cattle, including cows, so that there is always the possibility of milk containing tubercle bacilli, which when allowed to enter into the human system easily set up consumption and other forms of tuberculosis.

The signs of consumption are well known. Sometimes the disease commences in an insidious manner, the patient showing loss of appetite and more or less general ill-health, until gradual loss of flesh and weight (hence the names "phthisis," "consumption," or "decline") accompanied by a constant cough and expectoration, hoarseness, shortness of breath, and also by night-sweats, makes it apparent that there is something serious the matter with him. Then he begins to be feverish, especially towards evening, the "hectic flushes" on the face being an almost unmistakable symptom of consumption, the expectoration shows streaks of blood, or there are now and then attacks of serious hæmorrhage or blood-spitting—hæmoptysis. If there is no turn for the better the patient loses ground gradually, he gets thinner and weaker from day to day, and dies eventually from exhaustion or some complication or other. By some dispensation of Providence, however, consumptives are the most hopeful of sufferers, and often enough they make plans for the future up to the very last moment without realising their extreme condition.

250. In a large number of cases the disease appears to become arrested or stationary, and the patient goes on for many years troubled more or less with a chronic cough and other symptoms, but not to such an extent as to prevent him from enjoying a life of comparative comfort. Naturally this is largely the result of hygienic precautions and

the observance of commonsense rules quite apart from the more complicated details which form the so-called "open-air treatment."

On examining a consumptive patient, the doctor finds signs of disease in the lungs. Where these signs are rather vague, or in order to confirm his diagnosis, he examines the sputum or expectoration—or he sends it to be examined microscopically at some pathological laboratory. If it is found to contain tubercle bacilli, there can be no further doubt as to the case being one of consumption. If no tubercle bacilli are found, it is not equally certain that the case is not one of consumption, though if repeated examinations show such a negative result, one is justified in taking a favourable view.

251. The diagnosis of consumption having been formed, the doctor is now under an obligation to notify the case to the public authorities so that they may take the necessary precautions against the spread of infection. This is done with every consideration to the patient and his friends in order to save them unnecessary anxiety, or fear as to loss of employment.

Coming now to the question of treatment of consumption, it must be admitted that it is beset by many difficulties. Being to a large extent a disease which can be cured or ameliorated by improved hygienic conditions and the best possible nourishment, it follows that the masses of the population whose means are strictly limited, are at a disadvantage compared with the relatively few who stand economically on a higher level. The attempt to deal with the problem of tuberculosis by legislation and compulsory health insurance will require many years to bear any practical fruit, and it is even questionable whether the results will in the end be such as to justify the expenditure of the vast sums of public money, seeing that on the most important point, namely, the utility or uselessness of sanatoria as we understand them to-day, medical opinion is by no means unanimous.

252. Yet, we have not at the present time any better method of treatment of consumption than that upon which the sanatorium rests, and the object of which is to enable the sufferer to resist the ravaging effects of an invasion of tubercle bacilli—namely, an abundance of fresh air, abundance of sunshine, and an abundance of good, plain and digestible food. Everything else connected with the "open-air treatment," as it is called, is a matter of detail, and it is only because these essentials can be obtained to the best possible advantage at special institutions by persons of moderate means that the sanatorium for consumptives has come into existence. Time may yet, and probably will, bring a modification of it of so simple a character as to make it accessible in its full extent to the poorest and humblest.

Meanwhile, the consumptive individual who cannot obtain the desired admission into a sanatorium or who has returned from one, can do a great deal for himself by strict application as far as possible of the principle named above. He must choose, also as far as practicable, an occupation appropriate to his strength, and one that is not likely to aggravate or cause a relapse of his complaint. Any employment for instance which necessitates work in an ill-ventilated room or in one where there is a risk of inhaling injurious fumes or particles of dust must be avoided.

On the other hand, it should be distinctly understood that a workman

or fellow-lodger who observes the rules laid down above with regard to the expectoration need not be regarded as a source of danger.

253. All the other remedies much in use against consumption—such as the various antitoxins or serums (including tuberculin), inhalations of various sorts, cod-liver oil, petroleum, creosote, guycose, carbolic acid, and the many tonics, are helpful in supplementing the open-air treatment and strengthening the patient accordingly, or in combating the many symptoms or complications. Many of the latter will be found discussed in various sections of this book. As to the many "consumption cures" we hear about, some of them are occasionally of temporary benefit, but not too much reliance should be placed on the successes they claim.

In rare instances consumption runs a rapidly acute course ending fatally in a very short time. This is particularly the case in what is known as "galloping consumption," which may not last longer than a couple of weeks. Sometimes an acute commencement of this sort becomes arrested, and the disease assumes the usual chronic character. The treatment of acute cases is on the lines of other inflammations of the lungs, as described under "Pneumonia."

254. Against that, the term consumption is often used indiscriminately when the patient is suffering from a non-infectious form of bronchitis, or some other catarrhal illness. Much unnecessary alarm and anxiety is thereby created and the practice is therefore not to be commended.

A large number of children die from what is known as consumption of the bowels, the correct name of which is "tuberculosis of the intestines." The disease is in all probability caused by feeding the little ones with milk from tuberculous cows.

In adults, intestinal tuberculosis is generally secondary to consumption, being most likely due to the swallowing by the patients of their own tuberculous expectoration.

The symptoms of intestinal tuberculosis are feverishness and constant diarrhœa, accompanied by marked distension of the abdomen. Very few of the sufferers recover, and the best way to counteract the diarrhœa is by the administration of enemata of starch and opium. Of course, the source of the milk supply must be changed right away.

Contagion **255**

Certain diseases require "contagion" or actual contact between person and person for infection to take place, and they are therefore styled "contagious." In others, the infection occurs indirectly by means of the atmosphere, and these are called infectious only. Of the former, the best known are the parasitic diseases, like the itch and ringworm, and the venereal affections, syphilis, gonorrhœa, and chancre.

Some diseases are both infectious and contagious, for instance, diphtheria and smallpox. Under ordinary circumstances the two terms are used synonymously. (*See under* "Infection.")

Convulsions **256**

Convulsions are involuntary muscular contractions occurring as a rule during unconsciousness. They are present particularly in epileptic fits, and in attacks of hysteria. Convulsions occur also in uræmia and eclampsia.

But in speaking of convulsions one

generally understands the convulsions of children. These are caused by many and different agencies, from nothing more serious than slight indigestion, a pricking pin or the cutting of a tooth, to very serious ailments, such as brain-fever or pneumonia. In some cases no cause is to be discovered, and these are supposed to be manifestations of real epilepsy. Worms should be sought for, they being a frequent cause of infantile convulsions.

The best way of dealing with a child in a fit of convulsions is to put it in a warm bath. When there is reason to believe that the fit is due to indigestible food, vomiting may be induced by tickling the back of the throat with a feather or by the administration of a little ipecacuanha wine or warm mustard and water. If the attacks are frequent, the probability is that the child has rickets, and then cod-liver oil is a valuable remedy. Potassium bromide may also be given in 2 or 3 grain doses. Attention should be paid to the child's bowels.

In adults, convulsions if not accompanied by loss of consciousness are generally hysterical in character, but the possibility of tetanus, hydrophobia or strychnine poisoning should on suitable occasions be borne in mind.

Corns and Callosities **257**

Corns and callosities are thickenings of the surface of the skin caused by continual pressure and friction, as, for instance, by tight or ill-fitting boots or by the constant use of certain tools or implements. Familiar examples are the corns on the toes and the callosities on the fingers in violin players, boatmen, etc. The difference between a corn and a callosity is one of extent. The former is conical in shape, the latter broad and wide, showing that the irritation is not confined to a narrow point only, as in corns.

A soft corn is a corn rendered sodden by the moisture between the toes. Sometimes corns produce an effusion beneath them, rising like blisters and thus leading to a spontaneous cure.

The best way to cure corns is to prevent their further growth. This can be done by avoiding the pressure which causes them. Where this is unavoidable, the pressure should be equalised over a larger area so as to form callosities instead of corns. The hard skin can more easily be scraped off by soaking it first in a warm solution of bicarbonate of soda or ordinary washing soda.

Corns can be removed gradually by the daily application of glacial acetic acid—which must be done carefully as the process is painful—or of collodium calosum, a salicylic acid preparation. Sometimes painting with tincture of iodine is sufficient. The following plan of dealing with corns and callosities is suggested in a recent text-book: "The growth or patch, having been well moistened with an antiseptic solution, is thickly covered with salicylic acid. Upon the top of this are placed several layers of moistened boracic lint, and over all a piece of gutta-percha tissue and a bandage. At the end of five days, when the dressing is removed, the thickened epidermis easily peels off."

When corns are inflamed and painful, use antiseptic fomentations.

Soft corns should be snipped off with the scissors, if possible; if not, an application of nitrate of silver of about 30 per cent. strength may be tried every four or five days. For

chronic corns, salicylic acid plaster is a good remedy.

To prevent the development of corns, hard or soft, it is often of benefit to wear stockings with a separate compartment for each toe. Most so-called "corn-cures" contain salicylic acid in some form.

If a corn shows signs of becoming soft, place a piece of cotton wool between it and the toes.

Cough **258**

Cough is nature's remedy in the endeavour to remove some irritating substance from the respiratory passages. It is therefore not always advisable to arrest the cough as such, but to look for its cause and deal with it. There are, however, coughs which are induced indirectly through nervous influences, and for which sedatives are suitable. This is the case particularly when there is no expectoration to get rid of, and the cough is due to the irritation of the laryngeal nerves. In such coughs one may use cautiously morphia lozenges or lozenges of morphia and ipecacuanha of British Pharmacopœa strength. Recently, drugs called heroin and glyco-heroin have come into use in the place of morphia. They may be given in doses of about 1-12th of a grain or half a teaspoonful respectively, to children comparatively less. Or, potassium bromide in 5-grain doses two or three times a day may be tried. In all cases it is, however, preferable not to have recourse to drugs without the prescription of a medical man, but to use such simple remedies as inhaling steam from a jug of boiling water or from a hot sponge. This is very often sufficient to stop an irritating cough.

With regard to coughs due to such diseases as consumption, bronchitis, laryngitis, etc., they are discussed under these respective headings. If the cough is caused by the presence of a foreign body in the windpipe or an accumulation of wax in one of the ears, it will, of course, be relieved only by the removal of the irritating substance.

The same thing may be said if the cough arises from an elongated uvula or from enlarged tonsils, when the operation of shortening the former or removing the latter will effect a permanent cure.

It is important to remember that coughing causes further coughing on account of the continued irritation, and that wherever possible one should not cough unless it is for the purpose of ejecting or bringing up expectoration. Patients often teach themselves to restrain the inclination to cough. An example of this is seen at church or at meetings, when a single word of admonition is sometimes sufficient to put a stop to a regular epidemic of coughing. The same thing also happens when a patient suppresses his cough because it gives him pain.

On the other hand, the absence of cough is not always a sign that there is no disease of the lungs present. This is frequently observed in advanced consumptives.

A so-called 'stomach cough' arises in persons subject to chronic indigestion, just as vomiting sometimes occurs during a bout of coughing. The cause lies in the nervous connection between the respective sets of organs and is spoken of as "reflex."

Counter-Irritation **259**

By this means we produce a superficial temporary inflammation with the object of relieving inflammation

and pain in deeper structures. The principal counter irritants are applications of hot poultices, mustard plasters, turpentine, tincture of iodine, and a number of others. These are called rubefacients, they produce only warmth and heat. Others, such as cantharides (Spanish fly-blister) and ammonia are called vesicants, because they raise blisters or vesicles.

Cramp **260**

Cramps, especially in the calves of the legs, are painful muscular contractions, and form a frequent source of trouble in many people. They come on, as a rule, suddenly and in the night, and although they do not last long, they are very painful. The cause may lie in indigestion or intestinal irritation, especially in children. Cramps are sometimes symptoms of a serious nervous disease. Persons with varicose veins are much troubled with cramps in the legs, especially when they have been standing a great deal. Rheumatism is sometimes accompanied by cramps. Cramps are occasionally produced by sudden contact with a cold substance. We have examples in the cramps which seize swimmers and those which follow on getting into bed between cold sheets. A cramp will sometimes result from sitting or lying in an uncomfortable position. Excessive smoking often causes cramps, both internal and external, and so does excessive exercise or fatigue. Some occupations are frequently the cause of cramps as, for instance, in the case of telegraphists, pianists, etc.

The best way of cutting short an attack of cramps is a hot bath, to which a fair amount of salt or mustard has been added. Cramps in the calves of the legs may often be relieved by a sharp bending of the ankle towards the front of the leg so as to contract the opposite set of muscles. Or a firm ligature may be applied round the thigh for a few minutes. Where they occur more or less regularly, the cause must be looked for and removed. Thus, for instance, the wearing of bed-socks will often prevent the occurrence of cramps in those who are subject to them. The cramps which form part of such diseases as cholera, tetanus, rickets, etc., will be found mentioned under the respective headings. Writer's cramp is also dealt with separately.

Cremation **261**

I mention this subject in these pages because, like most medical men, I am a firm believer in it, and because I utilise every opportunity to advocate its more general adoption as a means of disposing of the dead. In recent years the practice has shown a considerable increase, which is evidence of good sense among the people. Not only is cremation preferable in the interest of the living, seeing that it destroys millions of disease germs which might otherwise find their way to our food and water supply, but it is actually more respectful to the dead to dispose of their earthly remains in a cleanly and rapid manner than to let them rot in the ground for years and years until they have turned to dust.

If anyone is opposed to cremation because he considers earth burial a permanent retention of the remains, let him bear in mind that, with the constant growth of our towns, churchyards and cemeteries gradually make way for bricks and mortar, and let him reflect for a moment as to what becomes in course of time of the corpses buried in them. He will then

not be long in coming to a decision.

Cremation can be carried out now as cheaply as an ordinary funeral, and any undertaker will supply all the necessary information.

With the arguments used against cremation, especially that relating to detection of crime, I do not feel called upon to deal here. I may say, however, that there is a perfect answer to each of them.

Cretinism **262**

This condition is made familiar to us by the many performing midgets and dwarfs seen on the music-hall stage. They are as a rule cretins, which means they are affected with cretinism.

The symptoms of the abnormality are stunted growth, a thick neck, short arms and legs, thick lips, a large and protruding tongue, a large broad head, flat nose, large mouth, a coarse and wrinkled skin even in early life, a full abdomen and more or less mental deficiency up to complete idiocy.

Cretinism is seen in various parts of the world. The majority of European cretins come from the Swiss valleys and the Tyrol. Cretins are not unknown in England; they are met with mostly in the Lancashire and Yorkshire dales. Heredity is an important factor, especially when supplemented by climatic and geological influences. Occasionally these factors are absent and the affection is then spoken of as sporadic cretinism, because it is seen in isolated cases, and not more or less as an endemic disease associated with definite localities.

The cause is supposed to lie in some disturbance in connection with the thyroid gland, an organ to be mentioned more fully elsewhere.

As to treatment, satisfactory results have been obtained, especially in young cretins, by the continued administration or thyroid extract. (*See also under* "Backwardness," "Infantilism," and "Thyroid Gland.")

Croup **263**

Great confusion exists with regard to the use of this term. Its real meaning is a hoarseness caused by the narrowing of the windpipe. In practice it is taken to denote a state of inflammation of the larynx which may or may not cause the latter to be stopped up by the formation of a false membrane. At one time it was not quite possible to distinguish between diphtheria and croup, so that the two terms were used almost synonymously, but now with the help of a bacteriological examination of the membrane the difficulty has been removed.

There is a form of croup which though it is called by that name is not croup at all. In fact, it is often referred to as "false croup" or "crowing croup of children." It is not an inflammatory affection of the throat, but merely a kind of spasm of the laryngeal muscles which causes the child to crow as if it were suffocating. It is known also as laryngismus stridulus. Such children generally show also other forms of nervous affection, for instance, convulsions. Rickets is very often the original cause of the trouble.

The form of croup which is called membranous croup is probably always diphtheria, though it is admitted that there are cases of non-diphtheritic membranous croup. They are, however, rare.

These details are given here not for the purpose of encouraging home-treatment without the aid of a doctor, for croup—no matter of which form—is always a serious disease, but with the

object of facilitating the understanding of the condition.

Frequently, however, an attack of croup comes on without any warning. The first thing to do is to place the child in a warm bath to which some mustard has been added. At the same time hot fomentations should be applied to the throat and an emetic, say a little mustard in warm water, given. For the rest, the treatment must be left to the medical attendant. (*See also under* "Diphtheria.")

If the croup is nothing more than the so-called "crowing," the attack generally passes away soon, but it is apt to return again and again. For such children cod-liver oil is a most efficacious remedy.

Cupping **264**

Cupping—without blood-letting—or, as it is also called, dry-cupping, is sometimes a useful mode of treatment when an organ appears to be congested with blood, as, for instance, in headache with a feeling of throbbing and fullness in the head.

The application of a cupping-glass to the nape of the neck will relieve such headache. The operation can be done with the extinguishing cap of a spirit lamp, but its rim should not be too hot. It is also advisable to sponge the part first with some hot water. The cupping-glass must be applied evenly to the skin so as not to allow the entrance of air. For the operation to be effective, the skin must be sucked up forcibly into the cup.

When the blood drawn to the surface by the application of cupping is liberated by incisions, the process is called wet-cupping.

The operation of dry-cupping is a very simple one, but no one should attempt it without seeing first how it is done. Wet-cupping requires antiseptic precautions.

Cycling **265**

Cycling as an exercise is highly beneficial in the vast majority of cases since it combines physical activity of the muscles with breathing of fresh air out-of-doors; but it is often abused, especially by those not in training. Many cases of acute heart disease arise from excessive cycling by beginners. Sometimes cycling causes varicose veins, and it is a frequent factor in the production of hæmorrhoids. Care must be exercised in allowing young girls to take to cycling, as otherwise curvature of the spine may easily result. I have seen several cases of this kind.

Cyst **266**

A cyst is a swelling containing fluid or semi-fluid, jelly-like substances; the most familiar example being that known as sebaceous cyst. Dermoid cysts (mostly of the ovaries) are tumours containing many of the elements associated with the skin, such as hairs, nails, and also teeth, bone, etc. Retention cysts are those which retain the secretion of some gland through closure of its outlet. The treatment generally adopted with cysts is to remove them entirely or else to incise them and evacuate the contents. As a rule poulticing is not sufficient.

Dandruff **267**

This is the common affection of the scalp and eyebrows, known also by the names of seborrhœa and pityriasis, the principal characteristic of which is the formation of dirty-white or yellowish crusts or scales which fall off in small dry particles or powder.

The hair at the same time becomes thin or comes off in tufts producing more or less general baldness. In some cases there is considerable itching, in others this complication is absent.

The cause is supposed to be an inflammatory condition of the hair follicles brought about by a microbe, and the fact that dandruff is often seen in several members of the same family lends force to the opinion that it is contagious.

The treatment consists in removing the crusts and applying stimulant lotions or ointments. The former is best done by softening them thoroughly with oil and washing off afterwards with hot water and soap. As to stimulating lotions or ointments, the following are recommended, and where one fails to cure the baldness. another may be tried; Resorcin lotion consisting of 10 grains resorcin and 1 drachm of methylated spirit to an ounce of water; an ointment containing 15 grains of sulphur and 10 of salicylic acid to the ounce; white precipitate ointment; red oxide of mercury diluted with vaseline.

Occasional washing of the scalp with borax solution containing a little ether or spirit of camphor is also beneficial. A hard brush or small-toothed comb should not be used, and women suffering from dandruff should never pull at the hair when combing it, but handle it gently.

It is also of importance to take at the same time some general tonic, such as iron and quinine.

For obstinate cases there are now available vaccines and serums prepared from various microbes, and some highly satisfactory results have been obtained by their use. The treatment is, however, rather expensive, some fifteen or twenty injections at least being necessary.

Along with treatment, attention should be paid to the bowels and the diet contain a limited amount of fat — in the latter being included butter and cream. (*See also under* "Seborrhœa.")

Dead Fingers **268**

A sensation of cold and numbness in the fingers and toes is often experienced by anæmic girls and women—occasionally also by young men—to which the name of "dead fingers" has been given. It is the result of a spasmodic contraction of the blood-vessels which takes place either in the form of sudden attacks at indefinite intervals or is more or less constantly present. The parts affected are white, livid, or bluish, all depending upon the extent of the illness, and they tingle painfully. In cases which go from bad to worse, but which are fortunately rare, the condition supervenes which is known as Raynaud's disease, and which leads to gangrene in different stages.

The treatment of "dead fingers" is one of prevention. The hands and feet must be protected from cold by suitable gloves and socks or by wrapping them, if necessary, in cotton wool. Immersion in warm water is also very useful, particularly with a current of electricity passing through it. This helps to stimulate the impaired circulation. The general health must, of course, be attended to, and the condition which leads to the symptom receive attention. (*See* "Anæmia," etc.)

Deaf-Mutism **269**

The state of being both deaf and dumb is in the majority of cases

congenital and the result of some malformation. But it comes occasionally in early life in consequence of some disease, generally of the nervous system, and it is also a not infrequent symptom of hysteria. The only way to overcome deaf-mutism is to learn lip-reading.

As deaf-mutism is pre-eminently a hereditary disease, deaf-mute people should never be allowed to marry. Unfortunately, the offspring of persons affected with various diseases, or addicted to alcohol, or otherwise mentally affected also exhibit deaf-mutism to a large extent, so in order to prevent deaf-mutism altogether it would mean that marriage should be prohibited to a large number of persons besides deaf-mutes, and this is at the present moment at any rate, not a practical proposition.

On the other hand, in many instances the dumbness is the result of a deafness which can be cured by an operation in the ears or the throat (adenoids for instance), in which case speech may be acquired in due course. The ears should therefore be examined carefully in every child with signs of deaf-mutism.

The opinion prevails that deaf-mutes are often the result of a consanguineous marriage, but this appears to be true only in the sense that if deafness forms a family complaint, the children born to members of such a family who have inter-married are exceedingly likely to be congenital deaf-mutes.

One curious thing deserves to be mentioned, namely, that male deaf-mutes outnumber by far females equally afflicted.

Deafness **270**

Perhaps one out of every three or four people complains of some defect in the sense of hearing, and as a rule it is total or partial deafness. This deafness may be due to a number of causes. Sometimes it is the result of an organic disease in the ears, such as inflammation or abscess; in other cases the original trouble is a nervous disturbance in the brain or in the mechanism of the ear.

In a number of people partial deafness is caused by an accumulation of wax in the ears and improvement quickly follows upon careful and thorough syringing. Then again, after prolonged taking of quinine and other drugs there is often an impairment of the hearing faculty.

But by far the largest proportion of cases of deafness are due to chronic catarrh of the throat. This generally extends to the ears along the so-called Eustachian tubes which go from the throat to the middle ear. Deafness also accompanies, as a rule, chronic enlargement of the tonsils, especially in children and young people. There are a number of forms of deafness which result from the occupation of the person concerned. That known as "boilermaker's deafness" arises from working among machinery. The sufferer cannot hear ordinary conversation, but his hearing power is greater amidst a loud noise.

The cases of deafness due to organic diseases of the ears are obviously not suitable for self-treatment. Unfortunately, many people omit to seek medical advice until it is too late for any good results to be obtained. But much can be done in the early stages of catarrh to prevent the deafness from becoming serious. Gargling with astringent solutions, for instance dilute glycerine of alum or dilute glycerine of tannic acid, is to be practised daily,

once or oftener; the nostrils should be syringed with warm salt water and the tonsils and throat painted with tincture of iodine or a 10 per cent. solution of nitrate of silver, or one of protargol from half to five per cent. strong.

Where these simple remedies fail a medical man should be consulted.

In recent years the branch of medicine which deals with diseases of the ears as a speciality has made great advances, and many cases which were formerly regarded as incurable can be treated now with success. (*See also* "Ear, Diseases of.")

Death, Signs of **271—275**

So many people go about in constant fear of premature burial, and so many reports—most of them exaggerated, if not entirely untrue—appear of actual discoveries that persons supposed to be dead had been interred whilst in a state of trance, that too much attention cannot be devoted to the signs by which the fact that death has taken place is ascertainable beyond the slightest doubt.

It is, of course, possible for anyone who has the least timidity on the subject to put his mind at ease by leaving either in his will, or verbally, such instructions as will make him practically secure against premature burial. I should like to emphasize this point, for the fear of this terrible event is with many people an almost constant obsession amounting very nearly to an hallucination. In more than one case I have been able to end this agony of mind by the simple expedient of advising my patients to write out full instructions in the sense mentioned above, and to leave them in the possession of someone who will be sure to carry them out.

But when all is said and done, the fact must not be ignored that the possibility of premature burial does exist so long as the necessary precautions are neglected.

272. There are several signs of death, of which some are more reliable than others. It is always safer to form one's conclusion from a combination of various signs than from one single one, even though it appear very reliable. There is, first of all, the cessation of the heart's action. By listening with the ear, either through a stethoscope—the trumpet-like instrument which doctors use—or direct on the left side of the chest of a person, one hears a double sound something like the tick-tick of a watch. That represents the beating of the heart, and it is generally the first function to cease on the occurrence of death.

The pulse stops at the same time, as the pulse is merely the continuation of the heart-beat along the arteries. As the feeling of the pulse or the hearing of the heart's action generally require a certain amount of practice, other devices have been suggested for ascertaining the arrest in the activity of the heart. The well-known method of opening a vein need only be mentioned; if blood flows out life is not extinct.

A simpler sign is tying a ligature round a finger or toe. If death has taken place, no change is noticed, but if life is still present the ligatured limb shows signs of lividity from the congestion of blood behind the ligature. If the ligature is removed there is a white or bloodless-looking ring round the part to which it was applied.

273. Another sign that life has ceased is the arrest in the function of respiration. This is noticeable without the aid of any instrument, but as the breathing may continue, though it may seem to the eye to have stopped,

several methods have been introduced which are often made use of with advantage. One is the holding of a cold mirror before the mouth and nostrils. If there are indications of moisture upon it life is not yet extinct. Another simple procedure is to place a small piece of cotton wool on the lips and to watch whether it shows signs of motion through the inspiration or expiration of air. A very delicate test is to place a cup of water on the bare chest of the dying or apparently dead person, and to look whether the reflection from its surface moves or remains still.

Then there are a number of additional signs, each of which adds to the certainty that death has taken place. The skin turns ashy-pale, the eyes lose their lustre; the pupils do not act to light; and there is no response to mechanical irritation, such as a prick with a pin.

But reliable as the signs mentioned hitherto are, they are surpassed in reliability by those which make their appearance gradually and one after another. The first is the cooling of the body. This proceeds sometimes more slowly than at others, for instance, in stout persons, but on an average it may be said that it takes from about 15 to 20 hours for the body to become quite cold. Sudden cooling is not to be depended upon, it must have been slow and progressive.

274. What doctors and coroners call "hypostatic congestion" or "post-mortem stains" are an unfailing sign of death. These are the discolorations seen in parts of the body to which the blood sinks by its own weight. They look something like bruises, but they can be easily distinguished from them by the making of an incision. If blood flows out, it comes from a bruise which had been produced before death. This is often of serious importance in cases of suspected murder.

"Rigor mortis" or cadaveric rigidity is one more sign of death, but this is the one which may be simulated by cataleptic and other muscular contractions. It is never safe to rely upon this sign alone, although it is very rarely indeed that one who is experienced makes a mistake in the matter. The sign of rigor mortis sets in about ten hours after death, but it may commence earlier or be delayed by hours or days. In weak and exhausted individuals it appears very quickly and passes off very quickly. In those dying in full vigour the rigidity comes on very slowly and disappears just as slowly.

The first parts to become rigid are the muscles in the lower jaw and in the back of the neck. The rigidity then extends to the other parts, the legs being the last to stiffen.

275. If the signs mentioned in the course of the above remarks are all, more or less, subject to misunderstanding, seeing that experience has shown them to be compatible with life for longer or shorter periods, the one which remains to be mentioned is the only absolute and unmistakable proof of death. I refer to putrefaction, or decomposition.

The first indication that decomposition is setting in is a green discoloration on the abdomen which proceeds gradually all over the body. After that the process of dissolution goes on uninterruptedly. It is not usual to wait for decomposition to show itself before burying or cremating a body, because in most cases a combination of other signs renders doubt out of the question, but where circumstances demand particular cautiousness, such a postpone-

ment is permissible. Frequently not more than two or three days are necessary.

For this reason I strongly condemn hurried funerals unless considerations of health dictate them, and even then, the more sensible course to adopt is to keep the body in a mortuary for another day or two before finally disposing of it.

I have gone into this subject of the ascertainment of death at such length because I consider the information given of the utmost importance, especially for readers in out-of-the-way districts where an expert opinion is not always to be had at short notice.

Death, Sudden **276**

No matter what the cause of sudden death is, whether an accident or sudden illness, the ultimate reason of a person dying is always one of the following three: Syncope, asphyxia, or coma.

Syncope, or heart failure, may result either through a sudden diminution in the quantity of blood circulating in the body, for instance, hæmorrhage, internal or external, in which case the heart ceases to act because it has no blood to propel, or it may be the outcome of disease or poison paralysing the muscles of the heart. It is this form of syncope which is the cause of death in those cases where a sudden fatality occurs after a powerful emotion or shock.

Asphyxia or suffocation is caused by the arrest of the function of respiration through disease of the lungs direct, or by some mechanical interference with the function of the respiratory organs. In the latter category are included the deaths by strangulation, drowning, etc. Death during an epileptic fit is generally due to asphyxia, the patient falling unconscious whilst his face is buried in the pillow or the respiraton otherwise obstructed.

Coma, or deep unconsciousness, is the immediate cause of death in apoplectic seizures or other affections or accidents involving the brain. Strictly speaking, death by coma means finally death through syncope, for the brain trouble produces paralysis of the heart. Death from sunstroke or heat-stroke is an example of this class of sudden death.

Of more or less chronic illnesses which may end in sudden death the following are the commonest: Valvular disease of the heart, rupture of a gastric ulcer, rupture of aortic aneurysm, angina pectoris, etc.

Delirium **277**

A person is said to be in delirium or delirious when he is more or less unconscious, the mental faculties being in a state of excitement or confusion. At the same time he shows signs of delusions or hallucinations, the speech is incoherent and senseless, and various muscles are constantly in a state of activity.

Delirium may be the result of alcoholic or other intoxication, or it may be one of the symptoms of some disease of the central nervous system. Or it may be purely a manifestation of senile decay.

The treatment consists in trying to make the patient go to sleep and taking the necessary precautions to prevent him from injuring himself or others. For the rest, all must necessarily depend upon the cause which is responsible for the delirium. (*See under* "Alcoholism.")

Dengue **278**

This is an infectious and epidemic

disease prevalent in India and other parts of Asia, also in Egypt and the West Indies. It is also known by the names of "Dandy fever" and "Break-bone fever." The infective virus, which is not known, is transmitted from man to man by mosquitoes.

The symptoms are headache, a high temperature, pain and swelling in the muscles and joints, a rash, sore throat, and inflamed eyes. It generally begins very suddenly, and an attack lasts about a week, relapses being very frequent. The treatment is like that of any other knd of fever, especially as regards reducing the high temperature by the application of cold.

Diabetes **279—285**

There can be no question that the number of people suffering from diabetes is on the increase. Whether there is any foundation for the suggestion that the cause for this lies in the rapidity of our modern means of locomotion, it is difficult to say. But it is quite possible that there is an indirect connection between the two factors, inasmuch as nervousness has a great deal to do with diabetes, and nervousness is one of the results arising from rapid and constant locomotion.

The two prominent symptoms of diabetes—or drinking diabetes, as it is popularly called—are a great increase in the amount of urine passed and a corresponding increase in the desire to drink water. The patient feels very thirsty in spite of the large quantities of liquid he consumes; he also experiences a ravenous hunger although he eats more than ever in his life; at the same time he wastes away gradually and gets weaker and weaker. He notices that he passes extraordinary quantities of urine which is of a pale straw colour, and it is, as a rule, that symptom which causes him to see a doctor. The latter upon examining the urine by chemical tests finds that it contains sugar in a larger or smaller proportion.

It is, however, necessary to mention that there are cases of diabetes which exhibit the symptoms described above, with the exception that the urine does not contain sugar. This form of diabetes is called "diabetes insipidus" as distinguished from the ordinary, or "diabetes mellitus," is supposed to be due to excessive secretion of the pituitary body, or to syphilis sometimes, and it is also known as "polyuria."

On the other hand, there are cases in which the presence of sugar in the urine is either of temporary occurrence or observed periodically without producing any apparent ill-effects. This condition is known as "glycosuria." and it often accompanies pregnancy and lactation; it is also a frequent incident in persons who eat habitually much sugar and starches. Such glycosuria is sometimes a symptom of liver disease or of diseases of the central nervous system, particularly the brain.

280. Many diabetic patients and others who desire to know whether their urine contains sugar, frequently ask for a simple method by which they can perform this test. There are several such methods, more or less complicated, which require the use of chemicals. But the so-called "fermentation test" is one which can be employed without much trouble. It is done as follows: Some of the suspected urine is placed in a large test-tube or high glass, and its specific gravity is taken with an

instrument called a urinometer, and which can be bought for a few shillings. (The specific gravity of normal urine is usually about 1,020; that of diabetic urine may be as high as 1,070, but is generally between 1,030 and 1,050). After taking the specific gravity, drop into the urine a small quantity of fresh yeast—say as big as a cob-nut—broken up into small fragments. Let the urine now stand for twenty-four hours in a warm place, and then take the specific gravity again. If the urine contained sugar, the specific gravity will have become less, and if compared with that of the previous day will also give a fair estimate of the amount of sugar passed. Because every degree of specific gravity lost corresponds to about one grain of sugar per ounce. If, for instance, the two respective specific gravities are 1,050 and 1,020, this means that the urine is diabetic, and that it contains 30 grains of sugar to the ounce or, roughly speaking, six per cent. This would be a rather severe case, the average being something like 2 or 2½ per cent., or about 10 grains of sugar to the ounce. Mild cases may not show more than half or one per cent.

281. The causation of diabetes is only partially known or understood. It arises from a disturbance in the chemical process of digestion with the result that sugar passes with the urine instead of undergoing the normal transformation into other substances before it leaves the organism. Certain organs, notably the liver and the pancreas (the latter corresponding to the sweetbread of animals) appear to be intimately concerned with the production of sugar in diabetes. But many cases occur in connection with accidents or injuries to the nervous system directly or indirectly, especially to the brain, and as a matter of fact, the question whether an accident is responsible for the occurrence of diabetes in a patient is often raised in the law-courts in respect of claims for compensation, with the decision in favour of the claimant.

Apart from what I have said already, diabetes is known to be common among well-to-do people who eat a great deal and live indulgently, or who lead a largely sedentary life, hence its frequent combination with obesity. It is much more frequent in men than in women, and is one of those constitutional diseases in which heredity plays an important factor. Among certain races, for instance, Jews and Arabs, diabetes is very prevalent, possibly because of dietetic predilections. There can also be no doubt that worry and anxiety are powerful factors in the causation of diabetes. Gout is frequently another cause which leads to it, at any rate these two diseases are often seen together in the same person. Diabetes is also said to have some connection with the change of life in women, especially those who are inclined to obesity and do not take much exercise, whilst they are fond of sweets and pastries. Sometimes a case of diabetes dates its commencement from a confinement, but, as a rule, this form of glycosuria is temporary only and probably associated with the act of lactation.

The theory that diabetes is due to some microbial infection has recently been suggested, but has not so far found many supporters.

282. Whilst diabetes is usually a disease of advanced life, it may occur at any age, even in very young

children. The younger the patient the worse the outlook. In older people diabetes may last for years and it can be kept in check by a suitable diet. In young adults, it generally runs a rapid and fatal course, treatment not being of any use.

Diabetic patients are subject to all kinds of complications, such as boils, eczema, and other affections of the skin, which is always unusually dry. The itching all over the body is severe. In advanced cases, gangrene is common, and amputation of a limb often becomes a painful necessity. Cataract in one or both eyes is another frequent complication, and so are various neuralgic complaints, especially sciatica. Pulmonary tuberculosis and pneumonia sometimes occur in diabetic patients, and the former occasionally kills the patient rather rapidly. In other cases the kidneys become affected. But the most frequent cause of death in diabetes is coma.

Diabetic coma is generally ushered in by acetonæmia (*which see*), and though it usually comes on rather suddenly, it is sometimes preceded by a rapid loss of flesh and much drowsiness. When coma is once definitely established, and the patient is more or less unconscious, death takes place in the vast majority of cases within 48 hours, sometimes much sooner. Even if there is a slight rally, it is only temporary.

283. The treatment of diabetes is mainly dietetic, and the various systems employed have the object of diminishing the amount of carbo-hydrates consumed by the patient without causing him to lose more weight. The difficulty is to lay down general rules, as almost every case requires its own diet.

Roughly speaking, diabetic patients must avoid all kinds of starchy and sugary foods and beverages, including bread and biscuits of the ordinary sort, rice, tapioca, sago, peas, potatoes, beetroot, pastry, sweet fruits, milk (except in very small quantity), beer, sweet wines, and minerals, etc., etc.

They are allowed to eat soups, fish, meat (but no liver), eggs, butter, cream, cheese, green vegetables, acid fruits, specially prepared bread and biscuits made from gluten; they may drink as much water as they like, also tea, cocoa, and coffee, wine and spirits in moderation, and diluted with plain or mineral water; all food and drink may be sweetened with saccharine and similar chemical substitutes.

Every diabetic should take exercise regularly, without fatiguing himself, attend to his bowels, and have frequent warm and occasional Turkish baths.

The complications require suitable treatment as they arise, and it is wise for the patient to remain under constant medical supervision.

Drugs are seldom of much use, though most doctors prescribe opium in some form or other. Alkalies, such as bicarbonate of soda or potash are given with some little effect, especially to check the occurrence of acetonæmia. Carlsbad and Vichy waters are given for the same purpose, and taking the cure at these watering places is often successful in diminishing the amount of sugar passed.

283a. The "fasting treatment" of diabetes is now recognised as a valuable remedy, especially in the graver cases, when dietetic treatment alone is not sufficient to effect an improvement. Its object is to keep the patient thin and underfed, and to find out what smallest quantity of food will maintain him alive. The fasting lasts from two to five days, during which

water only is allowed, as well as stimulants, like whisky. The fasting treatment must not be undertaken without a doctor's constant supervision, as sudden collapse and death may occur at any moment.

284. On the all-important question of diet it is necessary to mention that opinon among doctors is by no means unanimous as to the permissibility or otherwise of a number of the articles I have named. Even potatoes and bread, which no doctor would have allowed some years ago under any circumstances, are now looked upon with more favour, and permitted tentatively in suitable cases, of course with caution and in measured quantities. Bread is generally allowed toasted, or in the form of biscuits. None of the substitutes for ordinary bread are satisfactory, but recently I have read of a newly introduced biscuit which has met with some success. The formula is as follows: Unground poppy seeds 3lbs., ground nuts 8lbs., twelve eggs, flour of dried spinach 1lb. Salt to flavour and milk enough to make a stiff batter. The biscuits are dried and put up in sealed tins and will keep any length of time. They are not quite free from carbohydrates, but they contain them to a limited extent only.

285. Many diabetic patients also ask for a recipe to prepare their own gluten bread. The following will do:—

Take one quart of sweet milk, or milk and water, one heaped teaspoonful of good butter, a little compressed yeast beaten up with some water, and two eggs well beaten. Stir in the gluten flour until a soft dough is formed, knead as in making ordinary bread, put in pans to raise, and when light, bake in a hot oven.

The oatmeal diet is another recent addition in the treatment of diabetes, especially the severer forms. About 8 ounces of oatmeal cooked for two hours with the same quantity of butter, and the whites of six or eight eggs well stirred in should constitute the day's food divided into four portions. Whisky and water may be drunk with it, or tea and coffee by those who prefer them to alcohol.

As to the treatment of the rare form of diabetes referred to above under the name of diabetes insipidus, it must be admitted that nothing can be done. In a few instances the disease gets arrested spontaneously, and some doctors have reported favourable results from the use of electricity. The disease runs a chronic course, and the patient eventually dies from some complication or other.

On the other hand, temporary glycosuria frequently requires no other treatment than abstention for a time from starchy and sweet substances, and also from malted liquor.

Diagnosis **286**

In medical practice this term means the definite naming of the disease from which a patient suffers. A diagnosis can only be arrived at by a careful consideration of a number of circumstances among which may be named the age and sex of the patient, his or her family history from the health point of view, previous illnesses, if any, nature of occupation or employment, the symptoms experienced and their duration, and a number of others. Then comes a personal examination of the patient's organs, the feeling of the pulse, the taking of the temperature, if necessary or desirable the testing of the urine, etc. In obscurer cases, especially of internal organs or of the nervous system, there are various additional diagnostic aids, such as

electrical instruments, including the X-ray, sounds, bougies, the laryngoscope, the ophthalmoscope, and a large number of others. Various discharges or a specimen of the blood have often to be examined by the microscope and in other ways for the purposes of a definite diagnosis. Indeed, diagnosis forms the most important part of a doctor's work, for without a correct diagnosis it is impossible to apply the appropriate treatment. By practice and experience some doctors become expert diagnosticians, so that they can recognise diseases almost by a sort of instinct or intuition.

Diaphragm **287**

This is the curved partition between the internal organs of the chest and those of the abdomen, and it consists partly of muscle and partly of membrane. By its movements upwards and downwards, it takes part in the process of respiration.

Diarrhœa **288**

By far the largest number of cases of diarrhœa, are due to the presence in the bowels of some irritating substance taken in the form of food. Under such circumstances, the proper treatment is to administer an efficient purgative, such as a dose of castor oil or powdered rhubarb. But when the diarrhœa has already lasted some time, and the probability is that the irritating substance has disappeared, it is permissible to give an astringent like aromatic chalk powder in doses of from half to a teaspoonful, or from 5 to 10 drops of laudanum (tincture of opium), especially if the pain is severe.

Children bear opium very badly, and they should therefore never have it given to them except by medical prescription. But in many cases the diarrhœa of children can be stopped by a tablespoonful of lime-water administered with milk or alone. The principal thing, however, is to find out the cause. Very often it lies in an unclean feeding-bottle.

That attention must be paid in the first intsance to the food of the child is a matter of course, and the necessary change of diet must be instituted at once. If ordinary milk is found to be unsuitable, there are several preparations on the market which render excellent service.

In the case of adults, diarrhœa caused by fermentation can be checked by eating charcoal biscuits after meals. Or the following mixture will be found useful: Bismuth-Salicylate 80gr.; Salol. 40gr.; Syrup and water to make up 8oz. A tablespoonful every four hours.

This is also a useful formula in diarrhœa; Aromatic chalk powder 60gr.; tincture of catechu 3dr.; chloroform water to 3oz. One tablespoonful every two hours.

They are both suitable for children in doses of one or two teaspoonfuls.

Diarrhœa is a frequent symptom of many diseases, and, of course, the treatment is then directed to the primary cause.

There is a form of chronic diarrhœa which is attributed to nervous influences, and which is best treated by potassium bromide in doses of from 10 to 15 grains twice daily in very little water after food. The wearing of a flannel abdominal bandage is of great service in this and also in other forms of chronic diarrhœa.

During epidemics of summer diarrhœa in children, it is important to remember that flies play a con-

siderable part in spreading the disease by contamination of food, and measures should be taken accordingly. The children should also be well clad to protect them against sudden changes in the weather.

Diathesis **289**

By this term we understand a peculiar susceptibility of an individual in a certain direction. Thus we speak of uric acid diathesis, a condition characterised by an increase in the amount of uric acid present in the blood with a consequent tendency to gouty and rheumatic diseases, or the formation of stone in the kidneys or bladder. Other examples of diathesis are the catarrhal, hæmorrhagic, scrofulous, tuberculous, etc.

Diet and Dietetics **290—292**

Under this heading, I can lay down only a few generalities. I consider a mixed diet, that is, one consisting of both animal and vegetable foods, not only as the best but an absolute necessity, though occasional abstinence from animal food for longer or shorter periods is doubtless beneficial, especially where there is a tendency to gout and rheumatism.

The following is a sample of diet sufficient for a man doing a moderate amount of muscular work, divided, of course, in two or three meals: Ten ounces of beef; six ounces of ham; two eggs; two ounces of butter; one pint of milk; twelve ounces of potatoes; nine ounces of bread; one ounce of sugar.

That diet plays a great part in the treatment of disease is well known; in fact, in some diseases, as for instance in diabetes, a suitable diet is practically the only remedy. Doctors are often asked by patients what to eat so that they may get thinner; others want to get stouter. Whilst it is impossible to give full lists of dietary articles suitable for all, as much depends on the peculiarities of each individual, the following indications may prove of service as a general guide.

291. Those who desire to get rid of superfluous fat are allowed to eat fish (some kinds), and lean meat, eggs, fruit, green vegetables, stale bread, toast, biscuits, butter in small quantities; they are allowed to drink water in moderation, skimmed milk, unsweetened mineral water, tea or coffee sweetened with saccharine, wines (except champagne) and spirits in moderation.

They are not allowed to eat thick soups, some kinds of fish (eels, mackerel, salmon, herrings, sardines in oil), fat meat (including pork, duck, goose, etc.), starchy articles (like tapioca, sago, macaroni, oatmeal, rice, arrowroot, potatoes, peas, etc.), some vegetables (like parsnips and carrots), pastry and sweets, sugar, cream; they may not drink beer or stout, or sweet wines.

As to those who desire to get stouter they should eat and drink most of the things mentioned in the latter list, but it is as well to remember that thinness is in some cases a constitutional defect compatible with perfect health, and not to be influenced either by diet or medicines.

Other points on the subject of diet and dietetics will be found mentioned under the headings of a number of diseases or conditions.

Under the heading "Beri-Beri" will be found a reference to the all-important subject of "Vitamins."

292. As to the various special diets known by particular names, they are all more or less nothing but fads. But they have, as a rule, the advantage that they teach moderation in regard to the quantity of food consumed, there being no doubt that most people eat more than is required to keep themselves healthy and fit, with the result that they become ill.

Though not exactly within my province, I should like to say a word or two on the economic aspect of the subject of dietetics. It is not sufficiently known that the price of an article does not always correspond with its food value. The common herring, for instance, despised in many households, is both the richest and cheapest fish, richest as regards its nutritiousness, and cheapest as regards its pecuniary status.

There are many other instances showing that the working classes do not lay out their money for food as profitably as they might do, and one can only hope that future housewives will be different in this respect. In a number of schools, girls are now taught not only how to cook, but how to buy provisions and foodstuffs to the best possible advantage.

Diphtheria **293—294**

Since the introduction of antitoxins in the treatment of diseases, diphtheria has lost much of the dread with which it was regarded formerly. Hundreds and thousands of children now recover from it, whereas before, recovery from diphtheria was practically a rarity. In a popular book one can hardly say much about a disease in which medical aid is of prime necessity from the very commencement. It is therefore sufficient if I mention that diphtheria is a highly infectious disease, caused by a microbe called the Klebs-Löffler bacillus. It begins with a sore throat, pain in the angle of the jaw, headache, sickness, and other signs of feverishness.

As pretty much the same symptoms are present in far less serious affections, for instance in tonsillitis, unnecessary alarm may be prevented by an early bacteriological examination of the mucus, or of a piece of the so-called false membrane which forms over the back of the throat including the tonsils and the uvula, so that it is a wise precaution to consult a doctor in every case in which a child shows signs of a sore throat. The first precaution to be adopted at the same time is to isolate the suffering child from other children. The next thing is to hang a sheet wetted with carbolic acid solution over the door of the sick-room so as to prevent the further spread of the poison.

Toys and books used by the sick child should in every case be burned when done with, and the bed-linen, clothes, etc., thoroughly disinfected. The paralysis of the palate which is a frequent complication of diphtheria generally passes away after a while. Only very rarely indeed does it remain permanent.

294. As for the treatment of a case of diphtheria, I have already hinted that it consists principally of the injection into the skin of anti-toxic serum. At the same time the throat is cleansed and disinfected frequently with suitable solutions, and the strength of the patient maintained by an appropriate diet, chiefly milk. (*See* "Anti-toxins," "Croup," etc.)

Where complications occur, the necessary measures will be taken by the doctor in attendance. Thus, if

the windpipe (larynx and trachea) becomes choked through the spreading of the false membrane downwards, and the patient is in danger of suffocation, it becomes imperative to perform the operation of tracheotomy or intubation.

It is customary to inject some antitoxin into persons who have been subject to the risk of infection, with a view to preventing the outbreak of an attack of diphtheria by what is known as the process of immunization. It is perhaps as well to mention here that many cases of diphtheria have been traced to infection from cats and other domestic animals—in one case I know of, a parrot. I therefore wish to warn parents against allowing their children to kiss or fondle such animals too closely, a most pernicious practice.

Disinfection and Disinfectants 295

By disinfection we mean the destruction of the microbes which give rise to infectious diseases, and disinfectants are the means employed to achieve this end. The best disinfectant we possess is heat, and it is the method in use at most public disinfecting stations, either in the form of dry heat, steam, or boiling water.

Bed linen, clothes, etc., from a patient suffering from an infectious disease such as diphtheria, consumption, or scarlet fever, can be effectively disinfected by washing them in boiling water, with the aid of a good carbolic soap. (*See* "Antiseptics.")

For ordinary purposes, chemical disinfectants including carbolic acid, permanganate of potassium, chloride of lime, perchloride of mercury, etc., are very useful. But care must be exercised in handling them, as they are, as a rule, powerful poisons. The following are the usually employed strengths of some of these articles: Carbolic acid, one grain to the ounce of water. Perchloride of mercury (corrosive sublimate) one grain to two ounces. Chloride of lime ten grains to the ounce. Permanganate of potassium one grain to the ounce. A useful disinfectant of the stools of patients suffering from typhoid fever or cholera is made up of quick-lime which is gradually sprinkled with water in a wooden or metallic vessel to which the stools are added. Quicklime is also a good disinfectant for concrete floors, etc.

Dislocations 296

A dislocation is a displacement of the ends of bones forming a joint. Some dislocations are complete, others only partial or incomplete. The latter are also sometimes called subluxations. Occasionally a dislocation becomes "habitual," which means that it returns after even ordinary exertion over and over again. This happens generally in the shoulder. Some dislocations are congenital, as for instance, in the hip. The treatment of dislocations consists in replacing the joint in its proper position, and maintaining it so by the use of splints, bandages, etc. In habitual dislocations, an operation often becomes necessary.

It is interesting to know that dislocations may arise not only through an accident, but also through disease or inflammation, and even spontaneously for no apparent reason, especially in debilitated people. A dislocation can generally be recognised by the deformity which it produces, and also by the immobility of the joint. Any attempted movement causes great pain.

Drainage **297**

In surgical practice one means by drainage the method of affecting the discharge of pus or matter from the operation wound or from a cavity by means of rubber, glass, or metal tubes, or by the insertion of strips of gauze. Sometimes a wound has to be drained by an incision some distance away from the seat of the wound or of the operation. These incisions are spoken of as counter-openings.

Dressings **298**

Dressings for wounds have the objects of absorbing the discharges and of protecting injured surfaces from irritation, infection, or further injury. The most commonly employed substance is cotton wool, but there are a number of others, such as loosely-woven cotton cloth, gauze, jute, sawdust, moss, etc. They are generally rendered aseptic or antiseptic before use by being impregnated with solutions of carbolic acid, corrosive sublimate or iodoform, etc. Sometimes it is advisable to apply gutta-percha tissue before bandaging. Dressings must be changed frequently when a wound is discharging.

Dropsy **299**

Dropsy means the accumulation of serum—which is the watery constituent of blood—in the tissues or cavities of the body. It is a symptom of several diseases and not a disease in itself. Thus, we have dropsy in heart disease, in disease of the kidneys, or of the liver. Then there are local conditions which produce local dropsies, as, for instance, in the condition known as "white leg" in women after confinement. Slight dropsy is also seen in joints after an injury or round a "black eye."

Various names have been given to the various kinds of dropsy. That of the skin is called œdema or anasarca; dropsy in the abdominal cavity is called ascites, that in the scrotum—or round the testicles—hydrocele, and so on. Besides treating the cause of the dropsy it frequently becomes necessary to liberate the fluid accumulated by means of a surgical operation known as "tapping." In milder cases it is sufficient to give the patient internally citrate of potassium in 10 or 15-grain doses two or three times daily in a draught of warm water, and to apply hot fomentations or poultices, or to paint the parts with tincture of iodine; in others, hot and Turkish baths bring considerable relief. At the same time attention should be directed to the bowels.

Slight dropsy in the feet and ankles is often complained of by young women and girls who have to stand a great deal in the course of their employment. The trouble is generally more noticeable towards evening. Anæmia is in these cases a common contributing factor. The remedy lies in taking as much rest during the day as possible, preferably in the recumbent position. Any existing anæmia must be corrected by appropriate measures. As the wearing of garters is sometimes responsible for this form of dropsy, they should be abandoned without delay—being at best an unhygienic article of dress.

Drug Eruptions **300**

In the case of a large number of people the use of drugs, either externally or internally, is succeeded by a rash or other form of skin eruption which disappears again as soon as the drug is left off. This is rather an

important matter, as the rash may have the appearance of a syphilitic eruption or it may look like measles or scarlet fever and cause a great deal of alarm.

The following are the drugs in frequent use which may cause such eruptons, but many others not named here seem to affect some people in a similar way: Antipyrin, arsenic, belladonna, boracic acid, bromide of potassium, carbolic acid, chloral hydrate, copaiba balsam, iodine tincture, and iodide of potassium, mercury, morphia, quinine. salicylate of soda, sulphonal, turpentine, and vernol.

Drug Habit **301—302**

This is, unfortunately, a complaint which is very much on the increase owing to the facility with which powerful drugs can now be obtained in compressed tablet form. I therefore wish to warn my readers against the practice of immediately flying to the use of drugs for the purpose of relieving pain or other symptoms.

Many a sufferer from drug habit dates the beginning of his trouble from a thoughtless employment of a drug against headache or sleeplessness. It is by far preferable to bear patiently a temporary pain or discomfort than to become a slave to a drug, a habit which is in many cases absolutely impossible to break. The safer course is to endeavour to find out the cause of the pain or discomfort and to combat it. I knew the case of a gentleman who became addicted to opium and morphia for the relief of a pain caused by a damaged pair of braces.

As to the practice of having recourse to drugs for the purpose of obtaining a momentary pleasurable sensation I cannot find words strong enough to condemn it. It generally leads in the end to rack and ruin, inflicting endless misery upon the victim and his dependants, not to mention the danger, constantly present, that an overdose will cause sudden death, since most drugs subject to abuse of the kind mentioned are powerful poisons.

302. It is quite unnecessary to go into a description of the habits relating to the various drugs individually The symptoms are nearly always alike. The pleasurable effects are at first marked, after a while they begin to diminish unless the dose is continually increased. An attempt to discard the drug results in depression and a general feeling of something missing. A dose of the favourite drug brings temporary relief or exhilaration which is only succeeded by still greater depression. And so the vicious circle does its deadly work. The general health suffers in consequence, and mental or bodily breakdown soon makes its appearance.

The only way to break oneself of the drug habit is to discard it immediately and entirely, though in rare cases a gradual process may be preferable. No half-measures are of any use, and for this reason a voluntary or compulsory retreat to an institution is by far the safest method.

The chief drugs to which the above remarks apply are: Opium (laudanum) and its derivative, morphia; cocaine, chloral, hydrate, chloroform, sulphonal, and veronal. (*See* "Morphinomania.")

The subject of the abuse of alcohol, really a form of drug-habit, is discussed specially under the heading "Alcoholism."

(*See under* "Cocaine" and "Morphinomania.")

Drunkenness or Sudden Illness **303**

This is a point of the greatest

importance, and one the neglect of which is often responsible for loss of life. A man is seen to reel, or to fall down unconscious upon the pavement. He is immediately surrounded by a crowd, a policeman appears upon the scene, who, ascertaining that the breath of the sufferer smells of alcohol, takes him in the ordinary manner to the police station, where he is placed in a cell and charged with drunkenness. All this time the poor man may be dying from a burst blood-vessel in the brain, or he may be suffering from some other sudden illness, and the smell of alcohol may be due to a coincidence or perhaps to a drink taken a few moments previously to ward off a feeling of impending illness. It has even been known to be due to the administration of alcohol by some kind samaritan standing by.

I will not attempt here to describe the distinction between alcoholism and sudden illness. The task is one of extreme difficulty and baffles even the expert sometimes. My object has been merely to call attention to the point so that the benefit of the doubt may be given to anyone suspected of acute drunkenness.

Duodenum, Ulcer of **304**

There is really very little difference between ulcer of the stomach and that of the duodenum. Still, it is customary to distinguish the two affections separately although it is not easy to make an exact diagnosis. In one direction perhaps ulcer of the duodenum differs from that of the stomach. The pain which in the latter begins almost immediately after eating, commences in the former some time—possibly two or three hours—afterwards, when the food has left the stomach and entered the duodenum. Patients soon learn that eating something relieves the pain and for this reason the name "hunger-pain" has been given to it. In other respects the symptoms and treatment of duodenal ulcer are practically the same as those of the stomach, under which heading they will be found mentioned at greater length.

Dupuytren's Contraction **305**

This is a deformity of the hands not due to a burn or some other injury, and is characterised by a permanent bending of the fingers towards and into the palms. The process takes place gradually and painlessly, and when established the fingers cannot be unbent or even moved at all. The little finger is the one which generally becomes affected first and the ring-finger next. It is usual for both hands to suffer, though not to the same extent at the same time. The cause of the illness is not quite understood, but it is considered to be of an hereditary character, and some authorities attribute it to rheumatic influences. The nature of the employment must also have something to do with it. I have seen, for instance, the complaint in a number of gardeners, which suggests that pressure against the palms from implements employed is probably at least a contributing factor.

In the early stages of the affection some improvement follows upon the application of massage with the hands of the operator well-oiled and passive movements of the fingers, supported by the use of simple-fingered splints. In advanced cases operations become necessary, though even these are not often successful. Recently satisfactory results have been obtained by injections into the skin of a substance called fibrolysin—a mustard oil preparation.

Dysentery **306—307**

Though dysentery is a disease prevalent in tropical countries like India and Egypt, it is not unknown in temperate climates. It is a contagious or infectious disease, the infection being spread as a rule by polluted water and food contaminated by flies and dust.

The symptoms are persistent diarrhœa accompanied by bloody stools and severe griping abdominal pain. The treatment is chiefly of a preventive nature. As to the relief of the actual symptoms, if the services of a doctor are not available, and there is a household medicine chest at hand, the drugs to be given are opium and ipecacuanha. A dose of the former, say twenty minims of laudanum, is given on an empty stomach, and twenty minutes later a 20-grain dose of ipecacuanha with the patient lying absolutely quiet in bed. This process to be repeated twice daily, unless the medicine is vomited out, when it must be given oftener. Some doctors recommend this plan in preference to giving Dover's powder (which consists of opium and ipecacuanha in combination). The diet to be the plainest possible and limited in quantity, chiefly milk or whey. Where this cannot be retained, meat juice or beef essence may be tried. Where the patient shows extreme weakness, some alcohol may be given to him.

307. There is a catarrhal form of dysentery, brought on by indigestible food or a sudden change in the weather. A few days' rest in bed and the clearance of the bowels by castor oil or some other purgative generally effect a cure, though sometimes the illness assumes a chronic character.

The form known as amœbic dysentery is that which is prevalent in the tropics and is caused by a microbe called amœba coli. Abscess of the liver is one of its frequent complications.

The most dangerous form of dysentery is the bacillary, which is due to a different kind of microbe, called the bacillus dysenteriæ. The danger arises from the frequency of serious complications, such as perforation of the bowel, peritonitis, fatal hæmorrhage, etc.

In the chronic form of dysentery the stools are thin, watery, and very offensive. Mucus, blood and pus are sometimes so intimately mixed up with the evacuations that the whole stool is of a brownish or dark-coloured appearance. If a milk diet does not suit in these cases, and curds show in the stools, the whites of eggs form a good substitute whilst the attack lasts. Enemata of warm water with some alum in solution added to it are of service in chronic dysentery. Internally bismuth subnitrate in doses of about 20 grains two or three times daily may be given. The patient should wear an abdominal belt or bandage. For the painful desire to evacuate, without achieving results (tenemus) suppositories of opium or morphia are the best remedy.

Dysentery is one of the diseases which have of recent years been treated by serums or vaccines.

Where one is in danger of being infected with dysentery, all food should be protected from flies, the stools of the patient should be disinfected. No water should be drunk unless it has been previously boiled, and all eating and drinking utensils should be cleaned with boiling water and dried with a perfectly clean towel.

Ear, Diseases of the **308—313**

The visible part of the ear—called

the external ear—and especially the expanded portion called the auricle is subject to various affections of which two are very frequent, namely, eczema and hæmatoma. Mild cases of the former may be relieved by the application of some lead lotion or powdered zinc and starch; more severe ones require stronger remedies, such as painting with silver nitrate—about 10 per cent. strength. If crusts have formed, they should be removed by the application of oil or vaseline, and the ear covered with muslin upon which zinc ointment has been spread.

Hæmatoma is a swelling in the outer ear consisting of blood or blood-serum, which is seen so frequently in insane persons that it goes by the name "insane ear." Pugilists, also are exceedingly subject to it, though it is caused sometimes quite accidentally or without any known reason. The treatment at first is by means of ice or cooling lotions; if it gets no better, surgical interference should be resorted to without delay.

The opening of the ear and the external auditory canal leading to the drum of the ear are liable to be attacked by inflammation and other diseases, such as boils, swellings of a bony nature, polypus, etc. One of the most frequent complaints in this locality is the accumulation of wax, or impacted cerumen, a condition which gives rise to noises in the ear of different kinds, and to other symptoms, like giddiness, cough, more or less deafness, and occasionally pain.

309. To remove accumulations of wax, they should first be softened by dropping into the ear for a few nights a warm solution of bicarbonate of soda. After that the ears should be syringed with plain warm water, and when the wax has come away, a plug of cotton wool should be left in the opening of the ear for a few hours.

Foreign bodies get sometimes into the ears of children—occasionally also in adults—and their removal is a matter of some difficulty. The services of a doctor should be requisitioned, as clumsy atempts to extract the article may only push it further inwards, or rupture the ear-drum. Careful syringing with warm water may be tried, but no instruments should be used by unskilled hands. Insects find their way sometimes into the ears. They can be smothered by a few drops of oil, ether or chloroform, after which they can be removed easily by syringing.

Erysipelas forms sometimes on the external ear. A solution of ichthyol, 25 per cent. in water, should be painted on twice daily, and the parts protected by means of cotton wool and a bandage.

Frost-bite frequently attacks the ears. In fresh cases, rubbing with snow or cold water is the best thing one can do. If ulcers form, boracic acid ointment is a good application to use.

The outer ear is subject to a number of malformations, including abnormal size. When too large or projecting in an unsightly manner, a surgical operation is sometimes performed with satisfactory results. There are artificial auricles for cases in which the natural ones are either rudimentary or absent altogether.

The skin of the ear is subject to the same affections as the skin in other parts, for instance, cysts, herpes, warts, swellings, injuries, etc.

310. The diseases of what are called the middle ear and the internal ear can only be understood, and treated by those possessing the necessary training. It is sufficient to mention here that by

far the largest number of cases of deafness are due to chronic catarrh of the middle ear, or the cavity of the tympanum, which communicates with the throat by a tube called the Eustachian canal, or Eustachian tube.

This chronic catarrh is as a rule the consequence of an acute catarrh of the throat or tonsils, or it may be part of a general condition seen, for instance, in children and young persons of the so-called scrofulous type. An improvement is generally effected by the removal of the enlarged tonsils and adenoids. Chronic catarrh of the middle ear or otitis media, of which a more or less constant discharge is a prominent symptom, will benefit by the treatment of the catarrh of the throat and nasal passages. In addition, especially if there is some deafness, it is customary to inflate the ears by means of instruments called Politzer's bags. To some extent the patient can substitute for himself this part of the treatment by the following method: Keep the mouth and nostrils firmly shut and pretend to blow your nose or fill out your cheeks. The air thus blown out will find its way through the Eustachian tube to the middle ear where it will impinge against the drum of the ear without finding an exit. This is experienced as a bulging and slight cracking when the blowing must be stopped, otherwise the drum may burst, especially if violence is used at all. By this means air circulates in the ear passages, and the hearing is thereby improved. The process described may be repeated at frequent intervals, but caution is necessary.

Sufferers from chronic catarrh of the middle ear benefit as a rule very much from a change of climate, especially to the seaside, and also by taking some suitable tonic.

311. Where there is a discharge of pus—or matter—from one or both ears, the case is more serious, there being always the danger of the brain becoming implicated, and medical attention should be sought without delay, an operation having to be performed in most instances. Sometimes, however, syringing, gargling, or other methods of applying disinfectants are sufficient. If the drum of the ear becomes perforated, an artificial one will have to be introduced and worn. There are several kinds, the simplest is a "membrane" made of a wick or small plug of cotton wool which patients often learn how to introduce and remove with the aid of a small pair of forceps.

Occasionally the bone behind the ear —the mastoid—suffers as a result of inflammation of the middle ear, developing an abscess which has to be liberated by an operation. This happens more frequently in acute cases.

Hæmorrhage from the ears occurs sometimes as a complication of whooping cough or of chronic diseases like anæmia or Bright's disease, and the treatment must be directed to the cause, though rest and potassium iodide in 5 or 10-grain doses twice daily may do good.

312. As to the diseases of the internal ear which contains the delicate nervous organic apparatus associated with the function of hearing, they generally manifest themselves in two ways, namely, deafness to a larger or smaller extent, and "noises in the head." These two manifestations may occur together or separately, and it is difficult to say which is the more troublesome. Deafness due to internal ear disease is practically incurable, though some of the instruments recently introduced

are undoubtedly of some benefit now and then. There are also many forms of temporary nervous affections of the inner ear which result in deafness, more or less pronounced, and which being due to removable causes can be easily cured. Among these causes may be named over-indulgence in food and drink, especially alcohol, excessive smoking, the taking of some drug, like quinine of salicylate of soda, mental over-exertion, etc.

The second of the above-mentioned manifestations of internal ear trouble, namely, the "noises in the head," are a frequent source of constant annoyance. These noises, technically spoken of as tinnitus, vary greatly in character from a mere exaggeration of the sense of hearing, so that ordinary sounds are experienced as unbearable noises, to all kinds of sound production, such as roaring, ringing, or hissing more or less violent in extent. Sometimes the noise is a reproduction of the pulse, the beating of which is heard distinctly each time. Occasionally the noise is so much like the chirping of a cricket that the patient is absolutely convinced there is some live animal in his ear.

313. The cause of these noises may lie in any of the factors mentioned already under the present heading as giving rise to ear troubles, the commonest being an accumulation of wax in the ears, chronic catarrh, an occupation involving exposure to much noise, mental overwork and exhaustion, an inclination to gout and rheumatism, nervousness and neurasthenia, overdoses of quinine, aspirin and other drugs, so that the treatment of the condition must in the first instance be directed to the removal of the cause. Where the latter can be achieved partially only or not at all, a sedative remedy like potassium bromide, in 5 or 10-grain doses two or three times daily will give some relief. If the noises are experienced at night only, or when the sufferer is very quiet, the plan may be tried of being near a loud ticking watch or clock to relieve the monotony, or of sleeping with the window open so as to hear the noise outside. If necessary, in such cases, a doses of bromidia or dilute hydrobromic acid (from half to a teaspoonful) may be taken to secure some sleep —though it is better to do without. Sometimes a tonic of iron or syrup of hypophosphites is of better service than a sedative, particularly in neurasthenics.

Tinnitus often alarms the patient, but apart from the discomfort it is seldom of real importance. Only when the noises assume the character of distinct voices or musical airs is there any danger of insanity supervening, especially in people with a family history of lunacy.

In a large number of cases tinnitus disappears for longer or shorter periods without any treatment. It is always best to take as little notice of the noises as possible, and to go on undisturbed with one's daily work. (*See also* "Meniere's Disease.")

Eczema **314—318**

Eczema is the most frequent of skin diseases, although many cases which should really go by some other name are classed under the designation of eczema. As a matter of fact, there are many kinds of eczema, apart from acute or chronic cases, the difference depending on the appearance or character of the eruption on the skin.

There are many causes of eczema. Sometimes it is brought on by

external irritation, such as exposure to the sun, the outward application of drugs, the use of an irritating soap, or the handling of certain articles. The form of eczema known as "grocer's itch" is a well known form of the latter variety. It begins as a rule, in the hands and soon spreads over the wrists and arms. A similar kind of eczema is seen in workers in tar and other chemicals.

Some cases of eczema are kept up in a chronic state by discharges from the ears or nose. This is seen especially in children whose parents do not exercise the necessary amount of cleanliness.

Eczema is sometimes seen in various members of the same family suggesting a sort of hereditary influence. One cannot say exactly wherein that influence lies; perhaps in a susceptibility to attack by certain microbes, as it would appear that some forms of eczema present microbial characteristics. The cases of eczema which look like being contagious are contagious in the sense that the parasites which cause the skin eruption are conveyed from person to person.

315. That eczema is very often the result of some internal illness or general condition of ill-health is well known. Persons subject to attacks of indigestion, and most particularly children, are frequently troubled with eczema and possibly diarrhœa at the same time. Nurses often call this eczema "Heat spots." The same thing applies to elderly people who are subject to gout, rheumatism, and other affections.

In some people, eczema is caused by an excessive consumption of salt.

The most successful method of treating eczema is to find out the cause and remove it. Friction between two folds of skin, such a thing as a hidden pin or some other object will keep up an irritation giving rise to eczema of many months' duration, and it is obvious that no end of lotions or ointments will be of the slightest use as long as the cause of the irritation is not removed.

When this is not possible, the cause being more or less unknown or difficult to remove, the treatment must be directed in the first place to the prevention of all further irritation. Scratching, cold air, washing with ordinary water or alkaline soap must be avoided. In the place of the latter, one should use thin gruel and water, warm oatmeal water or milk and water. Where an ointment is to be applied and there are crusts on the skin, these should be softened first with hot poultices of bread and water or by means of strips of lint soaked in olive oil, so that they may be easily detached, after which the ointment or lotion may be applied with better chances of success.

316. In many cases of eczema, no further treatment is necessary than protection of the parts affected by simple oily applications suitably bandaged. Where ointments and lotions become necessary, it is better to apply them by means of lint than direct on the skin. The ointment should be spread out evenly on the strips of lint and the latter applied firmly. As to lotions, it is better to spread out the lint on the skin and to pour the liquid on to it, to put some gutta-percha or oiled silk over the lint and finally a bandage on top. In this way, the action of the lotion lasts longer.

Sometimes the use of a dusting powder is sufficient. One consisting of equal parts of starch powder and

oxide of zinc answers very well in early stages. Or boracic acid in powder is equally efficacious. If the eczema is moist, it is better to use a lotion.

As to ointments and lotions, there are many of them, and if one fails, another, and then another, must be tried. Those promising most success are the various lead ointments and lead lotions, though in acute cases a lotion of a saturated solution of boracic acid or one of resorcin, two per cent. strong, are often found most effective when employed persistently and properly. In the more chronic cases the tar preparations, including liquor carbonis detergens of the strength of one or two drachms to the pint of water—well shaken—are more serviceable. In the cases of eczema produced by parasites, the use of sulphur ointment is generally followed by rapid improvement.

317. The itching which is so violent in most cases of eczema is, as a rule, relieved by these remedies; sometimes it is necessary to apply something stronger, say, cocaine collodion, 2 per cent. strength, or cocaine ointment, or glycerine of carbolic acid, but where the skin is much broken, this should be done with great caution. In some cases the itching is so severe as to require internal medication; those are, of course, best treated by a medical man.

The same remark applies to those cases of eczema which do not improve in appearance by local treatment alone, and in which it is necessary to give medicines internally, as the principal drug thus administered is arsenic, a well-known poison. In this connection, it may be mentioned that the arsenical mineral water coming from Levico, in the Tyrol, is a very useful remedy in chronic cases of eczema. It must, however, be taken with caution, beginning with the mild variety and going on gradually to the strong.

318. Eczema of the legs, resulting, as a rule, from varicose veins, is a very obstinate complaint. The patient should remain in a recumbent position with the legs raised, or he should at least have the legs bandaged from foot to knee, preferably with rubber bandages.

In cases of acute eczema the diet should consist of milk, chiefly. In the chronic cases, it is necessary to abstain from alcoholic and other stimulants, including spices, condiments, etc.

A useful tonic and "blood-purifier" in eczema, both acute and chronic, is one consisting of 4 ounces fluid extract of sarsaparilla and 60 grains potassium iodide to 4 ounces of chloroform water.

The various methods of treatment described above may be supplemented by medicated baths, prepared by the addition of alkaline salts, bran, or sulphur. (*See* under "Baths in common use.")

Elastic Bandages **319**

The object of elastic hosiery, which includes stockings, socks, knee-caps, leggings, thigh pieces, knee hose, thigh hose, anklets, elbow-pieces, cuffs, mittens, etc., is to exert continuous pressure in the respective part, and therefore prevent as far as possible further dilatation of blood-vessels and consequent congestion. Elastic bandages are used for the same purpose, and are adapted for more general use inasmuch as they need not be made to special measurements. Where such measurements have to be taken, this should be done from the limb direct first thing in the morning.

Elastic bandages and stockings, etc., are the recognised method of treating varicose veins and other deformities in the legs or weakness in the lower extremities. If they are to do good they must be worn constantly. They should be put on before the patient leaves the bed and removed when he lies down for the night. Elastic bandages, etc., should not consist of rubber alone, but of rubber mixed with silk or cotton so as to be light and porous.

Electricity, Injuries by 320

Burns caused by powerful electric currents occur now pretty frequently, and although they are not as apt to cause blood-poisoning as other burns, they have the drawback of being rather slow in healing. They also occasion far more shock to the system generally than burns by fire or chemicals. They are treated pretty much in the same way, by cleansing and the application of dry dressings.

The following guiding rules have been laid down for cases of electric accidents: (1) Break the circuit at once if there is an interrupter close at hand. If not, lose no time but proceed to rule 2. (2) Do not touch the victim with bare hands. If rubber gloves are not at hand, pull the victim away from the cable by the coat tail or fold a coat or another dry article into several thicknesses. Use this as a hold to remove the victim away with. (3) If difficulty is experienced, make a pad out of some garment and place it between the ground and the part of the body touching the ground. This will help to break the circuit. (4) The victim having been pulled away from the cable, free the neck from all clothing and apply artificial respiration. Separate the teeth by placing between them a piece of cork, a folded handkerchief, or anything else.

Since the introduction of the X-rays numerous cases of injury to the skin have occurred through exposure to their influence, though this happens now much more rarely, as shields and other protective measures are more widely used. The milder cases resemble a superficial burn or inflammation, the more serious ones are like burns of the worst kind, necessitating sometimes, as in the well-known pioneer victims, amputations and other extensive operations.

Electricity, Treatment by 321—323

Much advance has been made in recent years in the treatment of disease by electricity in some form or another, and a very large number of electric instruments are now available also for purposes of diagnosis. Both the faradic and galvanic currents—the difference between *faradism* and *galvanism* consisting principally in the fact that the latter produces chemical changes in the tissues whereas the former does not—are employed chiefly as stimulants with the object of exciting muscular and nervous activity, and also as sedatives to allay pain, induce sleep, and overcome general irritability. By electric treatment one can also promote absorption, coagulation, and resolution of fluids so as to reduce swellings and inflammation.

Quite recently the practice has been introduced of administering drugs by the aid of electricity in the form known as *cataphoresis*, *ionization* or *ionic medication*. It causes drugs and other substances to enter into the system by way of the electric current in the shape of molecules known as "*ions*."

322. Other electrical treatments include the *sinusoidal*, as exemplified in the Schnee four-cell bath which is much employed in nervous affections involving principally the arms and legs; the *high-frequency currents* used largely in hydropathic establishments for the cure of rheumatic diseases; a modification of the high-frequency current known as *Bergonié's Method* which is proving useful chiefly in cases of obesity as a substitute for muscular exercise and massage, the *static-wave current* with spark production which owing to its effectiveness has a marked influence on the mental condition, and is therefore useful in hysterical and similar functional disorders; *electrolysis*, the principle of which is to cause destruction of living tissue by chemical decomposition as seen in the removal of superfluous hairs, or in the treatment of nævi and birthmarks; the *electric-light treatment* known also as *Finsen's Method*, the essential of which is the subjection of the skin or other part affected, to the rays of a powerful arc lamp from which the heat rays are cut off leaving the violet and ultra-violet rays, a form of treatment employed in lupus and tuberculosis of the skin, as well as in various hair ailments including alopecia areata, and in some chronic cases of eczema; the *radiant heat bath*, by which free perspiration is induced, this being a modification of a Turkish bath cabinet, possessing several advantages over the latter; *Diathermy*, a method of applying heat locally by continuous high-frequency current, so that deeper parts, such as joints, can be subjected to greater heat than is otherwise possible; and finally the *X-rays* or *Roentgen Rays*, the production of which is dependent upon the passage of a strong electric current through a tube from which all air has been withdrawn, and which have a tendency to destroy unhealthy rather than healthy structures. Those enumerated do not by any means exhaust the many forms of electrical treatment in use more or less, and as to the various diseases which benefit from their employment, this is a point touched upon under a number of headings in this volume.

323. But it may be of interest to explain here what an X-ray photograph or radiogram really is. The X-rays have the power of penetrating solid substances with the exception of those which are very dense, such as metals and bone. The photograph obtained is therefore only a photograph of the shadows thrown by these very dense objects, though by recent improvements it is now possible to obtain views of softer objects as well. X-ray photography is of use in surgery chiefly for the purpose of ascertaining the condition or position of bones in the body or the situation of bullets, needles and other foreign articles which have found their way into the system accidentally or otherwise.

Elephantiasis **324**

This is a disease seldom seen in England but fairly prevalent in tropical countries. Its chief symptom is an enormous enlargement of one or both legs (hence the name Barbadoes leg). The cause lies in the presence in the blood of minute worms called filariæ. The treatment is surgical.

Sometimes the cause of such a great enlargement lies in an obstruction of the circulation from scars and tumours, and occasionally no other explanation

exists than an unhygienic mode of life and a deficient diet. In such cases improvement follows upon the adoption of the necessary precautions.

Emetics **325**

Remedies given to produce vomiting. Some act locally by irritation of the pharynx or stomach, for instance, mustard, salt, large draughts of warm water, infusion of quassia, etc.; others act through the system generally, for instance ipecacuanha, apomorphin, tartar emetic, squills, etc. The administration of an emetic is often the best treatment for relieving an acute attack of indigestion or for effecting the exit of a foreign body from the air-passages. The action of emetics will also be referred to in relation to the treatment of cases of poisoning.

Emmenagogues **326**

Remedies the object of which is to restore the menstrual function when arrested through other reasons than pregnancy.

A useful emmenagogue in cases of amenorrhœa, due to general exhaustion or want of tone is a pill made up as follows: Extract of aloes, 1dr.; sulphate of iron 2dr., and asafœtida, 4dr. Make into 100 pills. One to be taken after each meal, increasing gradually to three.

Emphysema **327**

The meaning of this term is presence of air or gas in tissues which normally contain none or an excess of air over the normal quantity. Although used chiefly in connection with disease of the lungs, we also speak of cutaneous emphysema, or emphysema of the skin, a condition which is sometimes seen underneath the skin of the face and rarely also in other parts. There is a peculiar crackling sensation, like that of brown paper, when the finger is made to play on the affected spot, but there is no "pitting" as in cases of dropsy. The cause lies in a communication having been established with the respiratory organs, usually through an accidental injury, hence the frequency of this complication in a fracture of the ribs.

For emphysema of the lungs *see under* "Lungs, Diseases of.")

Enema **328**

An enema means a liquid injection into the rectum or the back end of the bowel, but the term is also employed to denote the instrument by which an enema is administered. There are several such instruments. The one most commonly in use is a rubber ball with a tube at either end and double action. The nozzle is introduced into the rectum after having been smeared with vaseline or oil.

Enemata are not used only for the purpose of obtaining an action of the bowels. They are also employed for washing out the bowel when it contains thread-worms, for arresting diarrhœa, for feeding refractory or insane persons who refuse to take food in the ordinary way or patients who cannot take food by the ordinary channels, and also for other medical purposes.

A good all-round purgative enema is soap and warm water with or without a little castor oil. The quantity to be introduced in the case of an adult is from one to two pints; in that of a child from one to six ounces.

The addition of a little glycerine will add to the action of the enema.

Enemata of salt and water, of lime-water, or an infusion of quassia, are

very serviceable in the treatment of thread worms.

An enema of starch with or without laudanum in barley-water will arrest diarrhœa and soothe an irritable condition of the bowel.

Peptonised milk, beef-tea and eggs beaten up together make a good nutritive enema. From four to six ounces should be used at one time.

An enema of brandy and water is a good restorative after a severe hæmorrhage.

The frequent use of enemata is not very desirable as it tends to dilate the lower bowel unduly and also to remove the mucus present there which acts as a natural lubricant.

Enteric Fever **329—333**

Enteric fever—or typhoid fever—as it is still called by many doctors and laymen—is an infectious disease, the infection taking place through coming into contact with the excretions from a patient suffering from the disease and containing typhoid bacilli. Where this contact is an indirect one, as for instance if the excreta infect a common source of water supply, epidemics arise as a consequence. On the other hand, if the excreta are carefully disposed of, not allowing them to soil food, linen or bedclothes, there is practically no danger of infection.

The solitary cases of enteric fever which occur periodically can generally be traced to infection through such articles of food as milk, oysters, cockles, ice cream, watercress, etc., which have in some way or other become contaminated by sewage water containing discharges from enteric patients. It is also assumed that flies play an important part in enteric fever, acting as the carriers of the specific microbes.

The incubation period of enteric fever, that is the interval which elapses between the moment infection takes place and the appearance of the first symptoms, varies from 5 to 20 days, the average being about a fortnight. The characteristic symptoms are a variable amount of diarrhœa, the motions having a peculiar appearance and being of the colour and consistence of pea-soup, to which it is generally likened, a rash on the skin chiefly over the abdomen and chest, swelling of the spleen, and a condition of feverishness which lasts for about three weeks and occasionally longer. Headache is very frequent and severe, sometimes the first symptom. The danger always threatening in enteric fever is death through perforation of, or severe hæmorrhage from, the bowel; hence the importance of diet in the treatment of the disease, solid food of any description being inadmissible.

330. Relapses after an apparent improvement are quite common in enteric fever, and complications of all sorts, such as peritonitis, bronchitis, pneumonia, pleurisy, jaundice, etc., supervene very frequently. In children the disease generally runs a mild course, and in adults, also, the symptoms are sometimes so slight as not to give rise at all to the suspicion of enteric fever.

The duration of the disease is from four to eight weeks or more. Cases of enteric fever are more frequent in the autumn. Where the diagnosis requires confirmation, this is generally done by the so-called "Vidal test of agglutination." Some blood or serum from the patient is mixed with a culture of typhoid bacilli and a drop or two of the mixture are at once examined under the microscope. If typhoid fever is present, the bacilli are found

to clump together into masses of various sizes.

The mortality from enteric fever varies from 5 to 20 per cent. Hæmorrhage from the bowel, excessive diarrhœa, and suppression of urine are unfavourable signs.

Since anti-typhoid inoculation has been introduced among the British forces, the number of cases of enteric fever is considerably less than formerly. Such an inoculation gives immunity against the disease for about two or three years.

331. The treatment of a case of enteric fever demands the utmost skill and care on the part of both doctor and nurse. The few details given here are not intended to dispense with the services of either, they are meant to instruct the friends of the patient so that they can render some assistance or interfere as little as possible.

In the first place, rest in bed is absolutely necessary, and all possible precautions against the infection of others must be taken apart from notifying the public health authority. All excretions and all substances or articles with which the patient comes in contact must be isolated and disinfected. The stools must be treated with suitable solutions of corrosive sublimate (1 in 500), carbolic acid 10 per cent.), or chlorinated lime. The patient must be kept scrupulously clean with the aid of antiseptic solutions, and the attendant must wash his hands repeatedly in similar antiseptics (weaker solutions of the above will do very well or one or permanganate of potassium, one or two grains to the ounce).

332. The diet of the patient, as already mentioned, requires prime consideration. It must be entirely liquid, and consist largely of milk as long as the temperature remains high, and for at least a week afterwards. Only then is it permissible to give solid food in a gradually increasing manner. Food is to be given in small quantities at a time at intervals of two or three hours.

The fever is to be combated by cold water applications either in the form of sponging, the wet pack or the full bath, the temperature of the water being generally about 70 degrees F., or more rather than less. In hospital practice there are special arrangements available by which such cold water treatment can be administered with comfort to the patient and little trouble to the attendants. In private practice the best has to be made of what accommodation there is at hand, the guiding principle being to subject the patient to as little movement as possible.

333. In addition other remedies such as antipyrin, quinine (in doses from one to five grains), etc., will be given to keep the temperature in check, and other symptoms or complications will be treated as they arise. Abdominal pain will be met by the application of hot fomentations or turpentine stupes. Continued severe diarrhœa will necessitate the administration of laudanum and bismuth—though this must be done with caution. Constipation is best treated by enemata of soap and water every second or third day.

When there is hæmorrhage from the bowel the usual method is to apply ice-bags to the abdomen, and to give opium or morphia by the mouth or subcutaneously. If perforation occurs, the outlook becomes grave, and the only chance of saving the life of the patient lies in an operation to be undertaken immediately.

During the last few years some cases

of enteric fever have been treated with injections of serum or vaccines, but the results have not been so satisfactory as in the preventive inoculations referred to above.

333a. Much was learned in the course of the great war with regard to enteric fever. In the first place the value of anti-typhoid inoculation was established beyond doubt, there having been an immense reduction in the number of cases as compared with the Boer war, and also a similar reduction in the case-mortality. Secondly it was ascertained that the infection may be transmitted by persons who have not themselves suffered from the disease, but have through contact with such or their excretions become so-called "carriers" of the microbes. By isolating them and effecting the necessary disinfection, extensive epidemics have been prevented.

It was found that the fewer drugs were administered the better for the patient, and quinine was about the only one given for reducing the temperature.

The milder cases were attributed to another bacillus than the typhoid, to which the name "paratyphoid" was given. In every other respect the paratyphoid cases were similar and therefore similarly treated as the typhoid, the diagnostic difference between them being the more complete "agglutination" in the latter.

Enteritis **334**

A catarrhal inflammation of the intestines which manifests itself chiefly by abdominal pain and diarrhœa, and for which the treatment is practically the same as that described under the heading of the latter disease. The causes of enteritis are to be found among the following: Improper food or excess of food; poisonous substances, including what are known as ptomaines; a sudden change in the weather when the body is not suitably protected against heat or cold; nervous influences, such as shock, accidental or otherwise, certain chronic diseases, such as tuberculosis, chronic dysentery, etc.

Enteroptosis **335**

In this condition, spoken of also as *viscероptosis* or *splanchmoptosis*, there is a considerable relaxation of the abdominal muscles and internal ligaments with the result that the abdominal organs including the stomach, liver, and intestines drop to a lower than their normal position. In some cases only one of the organs above-mentioned is effected, in others several. The symptoms are various, a dragging sensation in the abdomen, nervous depression, loss of appetite, constipation or diarrhœa, flatulence, pain in the stomach, headache, dizziness, general emaciation, etc. The treatment consists in wearing a wide abdominal bandage or some other mechanical support. Only in very extreme cases is an operation necessary or desirable.

Epilepsy **336—344**

Epilepsy, or the falling sickness, is one of the most distressing diseases to which mankind is subject, and one, moreover, which is generally inherited. Its symptoms are sudden attacks of unconsciousness, with or without convulsions, not caused, in the majority of cases, like apoplexy, by an injury in the substance of the brain, or, like syncope, by heart failure. In fact, the essence of epilepsy is the absence of an organic lesion anywhere, so that the disease

may be described as a functional disorder.

Epilepsy is observed more frequently in females than in males, though the difference is not very great, and it generally begins early in life, first attacks in middle or advanced age being somewhat rare. Epileptics are usually the children of an epileptic father or mother, or lateral relatives, like nephews, nieces, or cousins, of persons suffering from some nervous disease, such as insanity, hysteria, or neurasthenia. In some cases alcoholism in the parent or grandparent takes the place of, or accompanies the nervous disorder.

The first attacks are nearly always associated with some sudden emotion, like a fright or excitement, or with an injury to the head. In fact, patients and their relatives generally attribute the disease altogether to the incident which provoked the first seizure.

337. There are two kinds of epilepsy, the *major form*, called also *grand-mal*, and the *minor form* or *petit-mal*. The first is characterised by complete fits, with unconsciousness and convulsions. The fits are generally ushered in by peculiar sensations called *aurae*, such as tingling or numbness, twitchings, loss of sight or visual hallucinations, noises in the ears, and so on.

In some cases the *aurae* are absent, and the attacks commence suddenly, with unconsciousness. The patient falls to the ground, sometimes with a yelling cry which causes terror to the onlookers, and he is seen to be convulsed. Blood oozes out from the mouth owing to the tongue having been bitten, and there may be also other external injuries caused by the fall. Or there is a profuse secretion of saliva, with frothing at the mouth and nose, whilst the face is black and swollen. There may also be involuntary evacuation of the bladder or bowel. This, the fit proper, lasts a few minutes, rarely more than five, after which there is a further period of unconsciousness from which the patient emerges gradually.

This is a description of a usual attack; there are variations of it, some being severer and others milder.

338. In the minor form, or *petit-mal*, the attack does not consist of more than a momentary loss of consciousness, during which the patient may do something wrong or silly without knowing what he is doing. Sometimes he may experience a little giddiness or some other peculiar sensation like that of an *aura* in the major form.

This form of epilepsy is of enormous importance from a medico-legal point of view, as it is more frequently than the major form succeeded by what is called the *post-epileptic state*, during which the sufferer may perform some action of which he is absolutely unconscious. He may commit acts of violence, including murder, or some other extraordinary action. As in most of these cases of petit-mal, epilepsy is not suspected by anyone, not even the offender himself, it is very probable that many so-called criminals are sent to jail instead of to an asylum, where they belong to.

The severity of a case of epilepsy is judged partly by the severity of the attacks and partly by their frequency. The latter also varies very much, from intervals of many months to a few hours only. In rare cases the attacks are so frequent that the patient hardly recovers consciousness at all, one attack beginning before the pre-

ceding one has ceased entirely. This is known as *status epilepticus*, and if continued for some time, may end fatally. The frequency of the attacks is increased by injudiciousness in matters of diet or by worry. Alcohol particularly is apt to have such effect.

It is not usual for severe attacks to occur frequently; the rule is for a severe attack to be followed by a long interval, and for a mild one by a short interval.

339. Between the attacks epileptics generally enjoy good health, unless the seizures are so frequent as to effect their vitality. Mentally, too, they are, as a rule, highly efficient, and history is full of instances of great men who were sufferers from epilepsy. One has only to mention Julius Cæsar, Dante, and Napoleon Bonaparte.

In rare cases, however, epilepsy leads to imbecility, especially in the case of children.

Although it is possible by the administration of bromides principally, and also by other drugs, to diminish both the frequency and severity of epileptic fits, on the whole the medicinal treatment of epilepsy cannot be said to be very satisfactory. On the other hand, a great deal depends on the mode of life and on the diet; for that reason treatment at an institution, especialy in the case of children, is the preferable course.

Epileptic patients should be taught to eat slowly, contrary to their usual habit to eat fast and bolt their food. Their meals should be as plain as possible and as light as possible. Pastries, rich pudings, cakes, pork, veal, ham, greasy and fat dishes, salt, spices and condiments should be withheld entirely or permitted with the greatest caution and in the smallest amounts. The evening meal particularly, which should be taken at least two or three hours before bedtime, must be of the simplest character, or omitted altogether. Alcohol is permissible in such small quantities, that it is safer to prohibit it altogether. The exercise allowed should be regular rather than exhausting, and mental effort should be reduced to a minimum. Particular attention must be paid to the bowels, constipation being a common cause of production of fits. The education of epileptic children is one of the questions which puzzle social reformers, and the tendency is to have them educated at special schools and not along with healthy children.

340. Those known to suffer from epileptic fits should not be allowed to sleep by themselves, as they are subject to be suffocated during an attack, an accident which happens very frequently. They should be taught never to sleep in such positions which render them liable to bury their faces in the pillows.

The treatment by medicines must be left to the doctor in attendance. Epileptics should never treat themthemselves or be treated by an amateur. For those rare cases in which medical aid is unobtainable, and by way of instruction, I wish to mention that the most reliable drug in epilepsy is potassium bromide in doses of from 10 to 30 grains three times a day. Sometimes it is better to give a combination of bromides, namely, sodium bromide, potassium bromide, and ammonium bromide, from 5 to 10 grains of each. But the treatment must be continued for months and months, though in some cases a long course of bromide produces the condition described under Bromidism.

341. Sometimes one has to adopt other methods of treatment in

addition to, or in place of, the bromide. One is a salt free diet, the patient receiving absolutely no salt in his food; another is the frequent administration of the bromide in very small doses. Yet another consists in special bromide preparations, for instance, sabromin, which has given me very good results, bromipin, which is also spoken of highly, zebromal, a quite recent product, ureabromin, another new preparation, etc. Various glandular extracts have also been tried in recent years hardly with great success. Nor has electric treatmant, which is practised by some doctors shown satisfactory results either in reducing the number of fits or diminishing bromism. On the other hand, luminal, a variety of veronal, has recently come into favour again.

The plan suggested by one or two doctors to give opium in large doses for five or six weeks, and to follow this up by full doses of the bromides has found a number of supporters who have achieved some success in cases in which the bromides alone have failed to reduce the fits. Others believe in thyroid extract in addition to or in place of the bromides.

342. A number of cases in which the epileptic attacks are the result of an affection of the brain can be treated by surgical operations. This remark applies principally to the form of epilepsy known as Jacksonian in which the convulsions are limited to one side of the body only, thus showing that there is some local disease in the opposite part of the brain, whilst the loss of consciousness is either absent altogether or present to a slight extent. On the other hand, there is generally some paralysis left behind on the convulsed side or in the convulsed group of muscles.

In rare cases epilepsy is the result of some abnormal condition which excites attacks by so-called reflex action, and here also the help of the surgeon may be of great value. For instance, cases of epilepsy have been traced to a tight prepuse (phimosis), a polypus in the nose or ear, a scar resulting from an old wound, etc. (*See under* "Hysteria.")

As mentioned elsewhere in this book, epileptiform convulsions may occasionally be the outcome of worms in the intestines or of some other similar irritation. Naturally in such cases the treatment will consist in trying to discover the cause, and to remove it. But when all has been said, epilepsy in the vast majority of cases is of the idiopathic kind (that is, not dependent on an organic lesion or reflex irritation) for which the bromide treatment remains the one promising the best results.

343. As to the treatment of an epileptic fit as such, it is sometimes possible to arrest a threatening attack by a powerful mental or muscular effort. Some patients carry with them amyl nitrate capsules or strong smelling salts which they use immediately on feeling an "aura" or warning. If the warning aura is experienced in one arm or hand only —which is frequently the case—the patient should try and grasp firmly the wrist on the affected side with the unaffected hand. Some patients in whom this method of preventing attacks appears to be successful, wear a strap or tape fastened round the wrist which can be tightened on the first sign of the sensation coming on. It must be mentioned, however, that there is a disadvantage in this prevention, as the attack is in most cases only postponed and when it does

break out it is apt to be of more than usual severity. Still, it is conceivable that under certain circumstances this may be the lesser of two evils.

When the fit has broken out it is preferable — indeed advisable — to follow the principle: the less interference the better. The patient should be allowed to remain where he falls, unless the position is one of danger and he runs the risk of being injured, killed or drowned. His clothes should be unfastened, he should be turned on his back, a piece of cork properly secured or a towel should be placed between his teeth so that he cannot bite his tongue, and any false teeth he may wear should be taken out. A fatal termination of an epileptic attack is an exceedingly rare event, and the patient's friends need not be alarmed in the sense that his life is actually in danger. Should the attack last longer than usual, it is permissible to give a few whiffs of chloroform if at hand, but even this is better left alone, or to the decision of a doctor, if one happens to be present. If, when the patient is beginning to come round, he starts vomiting, he should be turned on his side, with a view to preventing suffocation through vomited matter entering the larynx. The fit having ended, the patient generally falls into a deep sleep from which it is best not to wake him. If he complains of headache, a 5 or 10-grain dose of phenacetin will give him relief, but if the case is one in which fits are followed by maniacal outbreaks or other forms of insanity, the proper thing in the interest of everybody concerned is to place the patient under control at some suitable institution.

344. I cannot enter here into the question of epilepsy from the national or public point of view, but its importance is undeniable. There is a great deal to be said in favour of the contention advanced by some social reformers that epileptics, like other degenerates should, if not sent to the lethal chamber, not bring into the world offspring who may become in time burdens to the rest of the community. That epileptics ought under no circumstances to marry is a point upon which there can hardly be two opinions. Epilepsy is and remains, with few exceptions, an incurable disease. Even when a patient has been free for years there is no telling when they may return on the slightest provocation.

Ergotism **345**

A disease produced by prolonged use of medicinal ergot or of rye-grain contaminated with an ergot-containing fungus. It occurs in countries where rye is a staple article of food, the symptoms being those of irritant poisoning, namely, vomiting, diarrhœa, colic, etc., or of a more nervous character such as cramps, spasms, headaches, and giddiness. In severe cases gangrene results in the fingers, nose, ears or other parts. The treatment is naturally of a preventive kind, but in advanced cases, the surgeon's knife is often required.

Tingling pains and slight muscular cramps should be regarded as a warning by those who habitually eat rye-bread that the grain from which it is made may be the cause of their complaints.

Erysipelas **346—347**

Erysipelas which ancient writers used to call "the rose" or "St. Anthony's Fire," is an infectious

inflammation of the skin, especially in the neighbourhood of open wounds. The microbe which gives rise to it (streptococcus erysipelatis), and which is of a very minute size, has the faculty of penetrating through the skin even if the latter is imperceptibly broken, and that accounts for the cases of erysipelas in which there is no obvious injury to the surface.

This latter remark applies particularly to erysipelas of the face, which generally proceeds from some insignificant abrasion of the skin.

Like all other infectious diseases, erysipelas begins with a period of incubation, during which the patient feels ill without there being any signs of a definite illness. This lasts as a rule from two to three days, then the skin begins to redden and to swell, the inflammation extending almost all over the face. The appearance of the patient's face is quite characteristic and makes him nearly unrecognisable, the features being enormously swollen, of a dusky red colour, and as a rule covered with blisters or blebs containing serum or matter. In the form known as wandering erysipelas the disease spreads successively from one part to another. In phlegmonous erysipelas, frequently also known as cellulitis, pus forms and the whole part looks like a large abscess.

Feverishness is very pronounced, the temperature being as a rule high for several days, and there are also other symptoms more or less severe in character, such as headache, difficulty in swallowing, some unconsciousness, and so on. After a few days the illness takes as a rule a turn for the better, the swelling diminishes gradually and the skin begins to shed in patches, like in scarlet fever. Altogether the disease may last from one to three weeks.

In old people the chances are not so favourable and complications, frequently with fatal results, are apt to occur in their case.

After erysipelas of the scalp the hair generally falls out in big masses.

Erysipelas is an occasional complication after surgical operations, when it may attack any part of the body situated near the wound.

347. The treatment in each individual case must, of course, be left in the hands of the doctor. It will consist of local applications of lead lotion, with or without opium, or various dusting powders, or of glycerine of belladonna, each doctor having his favourite method. A method of treatment has recently come into use which promises to become general. It consists in the application of gauze compresses soaked in a saturated solution of magnesium sulphate. The dressings are wetted every two hours with the solution, covered with oiled paper and removed for inspection every twenty-four hours. I have seen very good results from painting with tincture of iodine. Sometimes incisions into the skin become necessary to relieve the pain and tension, especially in the phlegmonous form referred to above. At the same time it is usual to support the system with internal remedies, such as iron or quinine.

The attempts to treat erysipelas by means of a serum prepared from the microbes which cause the disease, on the principal of other serums and vaccines, cannot be said to have been very successful, though a number of doctors have adopted the method for very severe cases.

Erysipelas is one of the diseases, occurrence of which must be notified to the medical officer of health, as it is contagious and transferable from

person to person. Under no circumstances should one in delicate health, especially if he has any parts of the skin broken, remain near a patient suffering from erysipelas.

Erythema **348**

This term is used to denote a number of forms of inflammation of the skin, the chief characteristics of which are redness and itching. The cause usually lies in some mechanical irritation. The commonest is *intertrigo* or chafing between two folds of skin rubbing against one another, for instance the insides of the thighs, underneath the breasts, between folds of the neck or of a joint, like the knee, etc. The condition is common in children and stout persons. The treatment consists in preventing friction and keeping the parts dry and separate from one another by the insertion of a suitable napkin or bandage. Some dusting powder, like a mixture of equal parts of starch and zinc oxide, may also be applied, or lead lotion with or without the addition of laudanum.

A severer form of erythema occurs in young persons during autumn and spring, and it runs an acute course, the inflamed skin especially on the arms and legs forming into vesicles and variously-sized pustules, there being at the same time more or less serious constitutional disturbances, rheumatic-like pains, etc. Quinine is of good service in these cases, and the bowels should be kept relaxed. If the itching is severe, a lotion of glycerine of carbolic acid will bring relief.

This form of erythema is known as multiforme, and if the skin eruption appears in the shape of nodular swellings the variety is called erythema nodosum. The latter appears to have some connection with articular rheumatism, hence the benefit derived from the use of salicylates or aspirin, as recommended in rheumatic diseases.

There is another form of erythema, known as simple or stomach rash which has some resemblance to nettle-rash. The skin shows at odd intervals variously-sized patches of redness, which are not raised or containing any liquid ("Heat-spots"). Whilst this eruption is in most cases the result of some auto-intoxication from bad or indigestible food, it is also often caused by external irritation, such as strong sunlight, contact with a poisonous plant, an injury, etc. Similar rashes also appear occasionally after injections of medicinal serums or vaccines, and a number of drugs taken internally produce sometimes eruptions of this kind.

The treatment, apart from removal of the cause, is on the same lines as that of erythema in general, described above.

Eugenics **349**

Under various headings in the pages of this book will be found a number of informative hints on what is the essence of the science recently come to the fore as "eugenics." That by the selection of a suitable life-partner one may hope to bring into the world offspring who will in the course of time become healthy men and women, physically as well as mentally, does not need proving; on the other hand, it does not follow that the human race will be the happier by the creation of generations to whom illness will be a thing unknown, even if it were within the sphere of practical possibilities for such a state of things ever to exist. The most that can therefore reasonably be expected from education in eugenics is that no one should marry or give in

marriage a person who will in all probability procreate degenerate offspring or pass on to his or her children any disease or deformity from which he or she may be suffering. This would be an enormous gain, and the more knowledge on the subejct is spread among the population by such medical books as the present volume, the more we may look forward to a diminution in the amount of congenital and consequently preventable disease. (*See also under* "Wife or Husband, selection of.")

Exanthem **350**

A feverish disease accompanied by a rash or eruption on the skin is called an exanthem or exanthema. The following are the diseases included among the exanthemata: *Cerebro-spinal Meningitis*, *erysipelas*, *measles*, *German measles* (*Rötheln*), *scarlet fever*, *typhoid or enteric fever*, *typhus* or *jail fever*, *varicella* or *chickenpox*, *variola*, or *smallpox*. (*See under the respective headings, also under* "Erythema," "Skin," etc.)

Eyes, Diseases of the **351—363**

The eyes and the structures in their neighbourhood are subject to a large number of diseases, some of which are of too complicated a nature even to be mentioned in a popular book of this class, an understanding of them being dependent upon an intimate acquaintace with the minutest anatomical details relating to the human body. But there are very many affections of the eyes and their appendages of a simple character, a timely attention to which with a view to obtaining if necessary suitable skilled interference may easily prevent serious trouble or possibly the loss of the eyesight. It is in this sense that the present article must be read and not for purposes of self-treatment.

Diseases of the eye are sub-divided into a number of classes in accordance with the part affected. There are first of all the diseases of the eyelids, including the eyelashes. The eyelids may be atacked by all the affections to which the skin is liable. They may be the seat of erysipelas, and other inflammations, of acne, anthrax, eczema, herpes, ulcers, etc., or of growths like warts, moles, nævi, cancer, etc. The hair follicles from which the eyelashes spring and the margins of the eyelids generally are subject to a particular kind of inflammation which is known as *blepharitis*. It is common in delicate and scrofulous children or in children which are somewhat neglected. Little swellings form, covered with crusts of dried discharge, making it difficult for the eye to open, and if further neglected the result is very often an entire loss of the eyelashes and more or less deformity of the lids apart from complication of the eyeball itself. The most important part of the treatment in this condition is cleanliness, and if commenced soon enough it will obviate the necessity of other measures. The eyelids should be washed persistently night and morning and for several minutes at a time with a warm solution of bicarbonate of soda or boracic acid, a teapspoonful to a pint of water of either or both—and if this alone is not sufficient, the application to the edges of the lids of a little ointment of yellow oxide of mercury by means of a small camel hair brush will assist the healing process and prevent scars. Should there be any tendency to turning of the eyelids outwardly (*ectropion* or blear eye) or inwardly (*entropion* the services of a

specialist must be obtained. The longer one waits the more serious the operation will necessarily be. Sometimes the eyelashes only turn inwardly, causing irritation of the eyeball. This condition is known as *trichiasis*.

It is as well to mention here that blepharitis is contagious through the medium of the discharge. Any sponge, towel, etc., used by a person suffering from the disease must not be used by anyone else. The finger with which one eye is rubbed may easily transfer the contagious substance to the other.

352. Another common affection of the eyelids are the little swellings known as styes. They are in reality small boils, very painful, and they frequently follow one another in rapid succession, when this may be looked upon as a sign of impaired general health. Sometimes the cause lies in eye-strain. The treatment of an individual stye or *hordeolum* is practically the same as that of a boil. Small hot poultices wil hasten the exit of the matter. In rare instances the pus can be liberated and the stye arrested by pulling out the nearest eyelash, which is generally situated on the top of the little prominence.

Where there is a succession of styes, the sufferer should look after his general health. Some tonic, such as syrup of hypophosphites, or phosphocose will be found of good service.

The little swellings seen occasionally in the eyelids away from the edges and which cause a great deal of annoyance since they take a long time in forming and disappearing arise from blocking of the so-called Meibomian glands situated inside the eyelids. Such a swelling is known as *chalazion* or Meibomian cyst, and can only be removed by a simple surgical operation.

353. Drooping of the eyelids or *ptosis* is a from of slight paralysis of the eye muscles present either by itself or along with other disturbances such as squinting, double vision, etc. Where the cause does not lie in syphilis or an affection of the brain—in which case there are also other obvious symptoms—attention to the general health and the use of electricity and tonics will do some good. If the inconvenience is great it may be necessary to wear a shade or an opaque spectacle glass over the affected eye, if only one is thus troubled.

Many persons are subject to more or less constant spasmodic movements or twitchings of the eyelids, especially if they happen to be a little excited. The cause may lie in a decayed tooth, accumulation of wax in the ears, some irritation in the eye itself, or it may be associated with some functional nervous disturbance, like chorea. Sometimes it is accounted for by teething troubles in children or by the cutting of a wisdom tooth in young adults. Involuntary winking of this sort—*nictitation*—may also be one of those habit spasms of the face or other parts which are sometimes a source of great unhappiness, since they are practicaly incurable except by a serious operation.

In the milder cases improvement can be obtained either by the removal of the cause, if it can be ascertained, or by a course of electric treatment. Very often the trouble disappears of itself when it is the result of mental or physical overwork, and on the whole it may be said that the affection is rarely of serious importance.

354. The eyelids are subject to various injuries, and that which has been mentioned under the heading "Black Eye" is a common illustration. The

black rings round the eyes which are seen frequently in people who lead an irregular life and do not take sufficient rest are a sign of impaired circulation. Dropsy of the eyelids is sometimes seen in highly anæmic people and also in those suffering from Bright's disease. It is an early symptom of trichinosis.

Numerous abnormalities occur about the eyelids, some congenital and others in consequence of some disease or other. That known as *epicanthus* is an extension of the bridge of the nose over the inner side of the eyeballs forming half-moonlike folds which diminish considerably the opening between the upper and lower eyelids. This gives a characteristic appearance, and may be mistaken for squinting because one eye is more or less hidden when both look sideways. In "*lagophthalmos*" the eyes are always entirely or partially open through paralysis of the eyelids, or as a congenital malformation.

Neuralgia in the eyelids is a common complaint. It is generally associated with what is known as supra-orbital neuralgia.

355. *Xanthelasma* is a condition peculiar to the eyelids. In elderly people, there develop first on the inner side of the upper lid and afterwards also on the lower, slightly prominent, yellowish patches or little swellings which are quite distinct from the neighbouring skin. They are very chronic, lasting for many years, and growing in extent, but they cause no pain or discomfort. As a rule both eyes are affected, though not in the same degree at the same time. If it were not for the disfigurement, there would rarely be occasion to interfere as Xanthelasma is not a serious or dangerous complaint, but in order to remove the unsightliness, operations are often resorted to, this being the only possible method of treatment.

356. Though not exactly an affection of the eyelids, the condition known as "watery eye," "*epiphora*," or excessive secretion of tears, is included in that category. It is a frequent and troublesome complaint caused in most cases by a stoppage of the passages along which the tears run from the eyes into the nose. These passages begin by two small openings in the inner corners of the eyes, called the puncta lachrymalia, which are continued by narrow channels (canaliculi) into the lachrymal sac situated against the bridge of the nose; the lachrymal sac in its turn is continued by a little tube called the nasal duct which is about three-quarters of an inch long and ends in the nasal cavity. The tears coming from the lachrymal gland situated over the outer corners of the upper eyelids traverse and lubricate the front of the eye and find their way into the puncta lachrymalia, and eventually through the canaliculi into the inside of the nose. When for some reason they are impeded in their course or when, as in weeping, or in inflammation of the lachrymal gland they are excessive in quantity, they flow over on to the cheek. Many of the affections already described result in a stoppage of the tear passages, and it may also be either congenital or due to the presence in the eye of a foreign or irritating substance. Diseases of other parts of the eye may also be accompanied by epiphora.

If the condition lasts for some time, and the application of warm fomentations or of astringent lotions—a good one is zinc sulphate of the strength of one grain to the ounce of lukewarm

water—does not arrest it, the treatment will consist of the introduction into the small canals of tiny instruments called probes or dilators, and if this is insufficient, too, a cutting operation becomes necessary, the details of which depend upon each individual case. Naturally, for these operative proceedings, a doctor, preferably one who specialises in eye diseases, is required.

The lachrymal sac, above referred to, is occasionally the seat of inflammation, acute or chronic, and this may also be the cause of watery eye. In the acute cases, fomentations and purgation will bring relief; in the chronic, which are distinguished by a swelling near the bridge of the nose—*mucocele*—the treatment is very difficult, the object being to get rid of an accumulation of pus, and operations become, as a rule, unavoidable. Technically, these cases are spoken of as "*dacryocystitis*," and they are amongst the most intractable doctors have to deal with.

357. Of diseases of the eye proper those of the conjunctiva are the commonest The conjunctiva is a very thin transparent membrane which lines the internal surfaces of the eyelids and the exterior of the whole of the eyeball. It is subject to inflammation from many causes, there being many forms of *conjunctivitis* or *ophthalmia*, which are the names given to them. All forms of conjunctivitis or ophthalmia, however, have that in common that the eyes are red and bloodshot, that there is considerable pain especially under the influence of light (*photophobia*) and more or less discharge of sticky mucus of half-pus like matter. This causes the lids to feel heavy, to become glued together and to smart as if there was some sand rubbing against them.

Among the causes of *catarrhal* or *simple conjunctivitis* may be named irritation by wind, smoke, dust, fumes, or other injurious substances, excessive heat or cold, exposure to a strong light, eye-strain through defective vision, etc. Since motor-cars have come into general use, conjunctivitis among motorists is a common illness, especially if no goggles are worn as a protection. Simple conjunctivitis accompanies most eruptive fevers. More severe forms are those cases of conjunctivitis which are the product of bacterial infection. They are known as *purulent* or *contagious conjunctivitis* (pink-eye), and the symptoms named above are more pronounced with a tendency to involve the nasal and respiratory passages. Deeper parts of the eyes, too, are apt to become affected. The discharge tends to assume the character of pus.

Other forms are the diphtheric or croupous, in which a membrane forms over the eyes and may destroy the sight in a few days, but fortunately it is rare; the follicular, in which follicles or nodules form on the conjunctiva in addition to the other signs of inflammation, and others of more or less severity.

358. Special mention must be made of one disease of the conjunctiva which is fortunately rare in this country, but prevalent in others, namely *trachoma*, known also as granular conjunctivitis, granular lids, Egyptian conjunctivitis, Egyptian ophthalmia, sago-grains and by other names. It is a highly contagious affection and is characterised by the formation of granulated tissue and afterwards scars, particularly under the upper eyelid. It is very apt

to attack the cornea (*see below*) and cause complete or partial blindness. The authorities are always on the alert against allowing anyone suffering from trachoma to mix with other people, hence the apparent harshness which they display sometimes in the case of poor immigrants who are not permitted to land when found to be affected in this way, unless arrangements can be made for the complete isolation and thorough treatment of the victims.

359. As to the treatment of the various forms of conjunctivitis I have described, the first thing to be done is to remove the cause of the trouble if at all possible. Dark or protective glasses should be worn where necessary. If the eyesight is defective, it must be corrected by suitable spectacles. The inflammation can be relieved by cold water bandages or bathing the eyes with solutions of boracic acid or bicarbonate of soda, and if there is any discharge, lotions of silver nitrate (not stronger than 2 per cent.) or of corrosive sublimate (1 in 10,000) may be used. Stronger solutions present dangers and should not be employed without a doctor's consent or prescription. Other useful local applications are lotions of zinc sulphate, one or two grains to the ounce, zinc chloride, 1 grain to the ounce, copper sulphate, 1 or 2 grains to the ounce, protargol, one or two per cent. strength, etc. The object should be to clear away all discharges as frequently as possible and to prevent all irritation. Where more elaborate treatment is required, a doctor should be consulted without loss of time.

Other affections of the conjunctiva, apart from inflammation, include *xerosis*, a state of dryness noticed especially in ill-nourished children, and for which the best treatment is attention to the general health and the administration of cod liver oil, etc.; burns, scalds, and other injuries, which require immediate suitable treatment on the lines laid down for such accidents under their respective headings, an important proviso being that in cases of this kind warm lotions are prefereable to cold; tumours, needing surgical attention, etc.

360. With regard to the diseases of the deeper structures of the eye I can only mention a few of them. The cornea, which is the transparent part of the front of the eye is liable to become inflamed (*keratitis*) or ulcerated, if it becomes opaque the sight is lost; frequently foreign bodies become embedded in it, and it is also subject to other affections and injuries. Under no circumstances should diseases of the cornea be treated by other than competent persons.

The iris is situated behind the cornea. It is a coloured circular membrane, the central hole in which constitutes the pupil. By its contraction and dilatation the pupil becomes respectively smaller or larger. Inflammation of the iris (*iritis*) generally accompanies affections of other parts of the eye, notably of the conjunctiva. (*See under* "Pupil, Irregularities of.") The sclerotic or white of the eye is also liable to inflammation and injuries.

The lens or crystalline lens is a transparent body lying behind the pupil and all rays of light entering the latter pass through the lens in order to be focussed on the retina, just as they do in a photographic camera. When the lens loses its faculty of adjusting itself for purposes of refraction—the so-called power of accommodation—it has to be assisted or replaced by glasses and spectacles. The principal affection of the lens is described elsewhere under

the heading "Cataract." (*See also under* "Vision.")

361. The complaint known as specks before the eyes, or *muscæ volitantes*, is one which though devoid of serious importance and generally of no consequence as far as the eyesight is concerned, is very often a cause of much annoyance or even alarm. In a number of cases the specks are the result of shortsightedness and will soon disappear by the use of suitable glasses. There appears to be some connection between the complaint and excess of uric acid in the system, hence the popular impression that it has much to do with sluggishness of the liver and constipation. At any rate, the frequent employment of saline purgative remedies, especially Epsom salts, has a most beneficial effect. The diet, too, should be of the simplest, both as to quality and quantity, and outdoor exercise must not be neglected. The less notice is taken of the the specks, the better.

Occasionally, specks before the eyes are caused by anæmia of the brain or they accompany hysterical manifestations. They may also form an early sign of cataract.

Glaucoma is another of the eye diseases not due to any special factors, and is characterised principally by disturbances in the eyesight, an increase in the tension and consequent hardness of the eyeball, sluggishness in the action of the pupil, coloured halos round lights and various neuralgias. The treatment of glaucoma is mostly surgical and the outlook is not very favourable.

362. Diseases of the retina and of the optic nerve, the parts of the eye which are in direct association with the brain, are as a rule not ascertainable otherwise than by examination with the ophthalmoscope (*which see*) and though occasionally they form part of some other disease of the eye, in many cases they are the result of constitutional illnesses, like Bright's disease, diabetes or syphilis of the brain. They begin with deterioration of the eyesight and pain in the eyeballs. These symptoms when the patient is the subject of albuminuria are an indication that the retina is implicated (*retinitis albuminurica*).

Atrophy of the optic nerve is a not infrequent disease which follows on inflammations of the retina and optic nerve (*Optic neuritis*). It is a common cause of entire blindness and the treatment is often unsuccessful, even in most skilful hands. In the early stages some good may be accomplished by the use of electricity.

There is a form of temporary blindness due to hysteria, which is usually recognisable by the presence also of other hysterical symptoms. It is nearly always one-sided, the other eye being practically normal.

363. The muscles which govern the turning of the eyeball into different directions, to the right, the left, upwards, downwards, inwards and outwards may become paralysed or otherwise affected and give rise to the condition known as squinting or cross-eye (*strabismus*). The squinting is said to be convergent if both eyes look at the same time towards the bridge of the nose and divergent when each eye looks towards the ear nearest to it. As a consequence, there is *diplopia* or double vision. Some cases of squinting are due to errors of refraction, and therefore curable by proper glasses, but generally the abnormality can be corrected by a surgical operation only, the latter consisting in cutting or shortening the tendon or tendons of

the affected eye-muscle, or muscles.

Nystagmus, or involuntary movements of the eyeball from right to left, or of a rotatory character, is frequently observed in miners or others as a result of their occupation, though the exact causation is not quite understood. Whilst some are of the opinion that the chief factor is deficient illumination, others think that the real cause lies in prolonged strain brought about by the unusual position in which the men work. Nystagmus is practically incurable as long as the causative agency remains active. In other words, complete abstention from underground work is absolutely necessary. The longer the rest taken, the longer it will take for the symptoms to return. Those who are abstainers from alcohol have better chances of recovery. Sometimes nystagmus is present in children from birth probably in consequence of some nervous disease, and nothing can be done to cure it.

The various disturbances of the eyesight, apart from diseases of the eyes, as such will be found mentioned under the heading—"Vision, Disorders of."

Fasting **364**

Complete abstention from food and drink is not possible for longer than from eight to ten days. Most cases of so-called fasting exhibitions are not genuine. A stout man can fast longer than a thin one, and fasting accompanied by cold hastens the process of dissolution. One can fast longer in a humid than in a dry atmosphere. For this reason men survive longer after accidents underground than on the surface. Without food but with sufficient drinking water a man can live for many weeks. The return from fasting to the consumption of food should take place cautiously and by very small instalments. A heavy meal after a long fast may produce sudden collapse and death.

Fasting as a cure is beneficial in many diseases, especially those which are due to over-eating and over-drinking, but it must be done prudently and not from motives of bravado. A twenty-four hours' fast will seldom do any harm to people in robust health; but this should never be exceeded. There is more to be said in favour of partial fasting; thus, for instance, abstention from meat one or two days out of seven may safely be practised by those who show a tendency to gouty or rheumatic diseases, to full-bloodedness, or even to constipation.

Fatigue Fever **365**

This is a feverish affection common among soldiers and others after undergoing severe exertion. The symptoms are loss of appetite, chilliness, excitement, sleeplessness, headache, and general indisposition. A few days' rest in bed and a meagre diet will soon re-establish a normal state of things, unless the condition is in reality the commencement of some more serious disease, like enteric fever.

Chronic fatigue, especially in women of the working-class who do not give themselves sufficient rest and sleep, is frequently mistaken for disease of a serious character. The symptoms are not unlike those of fatigue fever.

Favus **366**

A contagious parasitic disease of the scalp, manifested by yellowish, cup-shaped crusts through which the hairs are seen to penetrate. It is of a very chronic nature and may cause extensive scars and complete loss of the hair. As a rule it is seen among neglected children of poor parents. Occasionally,

favus attacks also parts of the body not covered with hairs.

The treatment consists of epilation and the application of parasiticides. Sulphur ointment is generally employed with rapid success. In obstinate cases the X-rays promise good results.

Feet, Affections of the **367**

These are described under their various headings, such as club-foot, flat-foot, bunions, etc. The condition known as "webbed toes" in which the toes are entirely or partially attached to one another is congenital unless the result of an accident, and if requiring treatment at all it is necessarily of a surgical character. The very severe form of neuralgia in the feet known as *metatarsalgia* or Morton's disease, if not amenable to ordinary anti-neuralgic treatment, including the wearing of comfortable boots or shoes, often necessitates a more or less radical operation.

Ganglions, such as occur on the wrists are occasionally seen on the feet. The treatment is the same.

It is hardly necessary to state that the feet are subject to various injuries, inflammations and tumours. But special mention must be made of the affection known as *mal perforant des pieds* or perforating ulcer of the foot, a frequent complication in paralytic diseases as well as in diabetes, which often necessitates amputation of the foot, though in a number of cases the usual treatment of ulcers suffices to effect an improvement.

Fermentation **368**

Fermentation means decomposition of a substance under the influence of ferments, the latter being generally bacteria of one kind or another. The yeast-germ, for instance, produces alcoholic or spirituous fermentation or decomposition of sugary substances into alcohol and carbonic acid gas; ammoniacal fermentation of the urine results in the production of ammonia gas and carbonic acid gas; lactic fermentation or souring of milk is the conversion of sugar or milk into lactic acid owing to the presence of a special lactic bacillus. The sour milk which is so much in fashion nowadays as a life-prolonging beverage is prepared by artificial addition of these specially-reared bacteria.

The fermentation going on in the stomach and intestines of people who incline to what is generally known as flatulence is caused by the presence of such bacteria in more than normal proportions. The treatment of flatulence by washing out the stomach has the object of eliminating the bacteria and thus preventing fermentation.

Fever **369**

This term is now little used except in combination with designations which specify the character of the fever, for instance, enteric, scarlet, yellow, etc. But sometimes feverish indispositions of a mild nature are described as simple, ephemeral or passing fever. Every feverish illness (pyrexia) has as its distinctive features, an elevation of the temperature, a quick pulse, increased respiration, and a feeling of malaise or general discomfort. The treatment will be found described under the various headings. Roughly speaking, it consists of rest in bed, attention to the eliminating actions of the skin and the bowels, and a suitable light diet.

369a. The form of fever known during the late war, first as P.U.O. (Pyrexia of Unknown Origin) and

afterwards as Trench Fever, was not unlike Influenza or Enteric Fever, with which it was frequently confused, until it was recognised as an independent disease. It was established that it was transmitted by lice, though the actual microbe was not discovered. The chief symptom, apart from the feverishness, was the excruciating pain in the shins. The treatment was practically the same as that of Influenza.

Fibrillation **370**

A fluttering or quivering sensation produced in localised muscular fibres by involuntary contraction. Whilst when occurring in other parts than the heart, the patients do not, as a rule, attach much importance to the symptom, it generally causes alarm when it is experienced in the region of the heart, especially if it is accompanied by occasional stopping in the action of that organ. Under the name of auricular fibrillation this condition has received much attention lately, and the general opinion is that unless caused actually by an organic affection of the heart, it is not of serious moment and requires no particular treatment. As to the fibrillary contractions in various muscles, they form one of the symptoms of the disease known as progressive muscular atrophy, in which case they are accompanied by muscular wasting and other symptoms, but in by far the largest number of cases they are only a slight functional nervous disturbance and need not occasion any anxiety. They generally occur after strenuous physical exertion.

Fibroma **371**

A form of tumour which consists of fibrous tissue and which is benign or only of local danger, and not like cancer, malignant or affecting the system generally. The variety known as *fibroma molluscum* is a disease of the skin characterised by the presence of fibromatous swellings with longer or shorter pedicles, scattered over the whole body. The treatment of the condition consists in the removal, by the knife, of the tumours situated in localities where they are the cause of discomfort or disfigurement and where they are easily accessible.

Filariasis **372**

A condition brought about by the presence in the blood of a parasite known as filaria, a kind of minute threadworm. The symptoms are, among others, a white, milk-like appearance of the urine (*chyluria*) the presence of blood in the urine (*hæmaturia*), the formation of abscesses and the enlargement of the scrotum or testicular bag, described under the heading Elephantiasis. The disease is rarely seen in other but tropical and sub-tropical countries or in patients who have not lived in the tropics, and the treatment consists in rest, free purgation, and a bland diet including alkaline carbonates and citrates as beverages. The grosser external deformities can only be corrected by suitable operations.

Much can be done to prevent filariasis, in places where one is subject to the risk of becoming infected by the adoption of precautions against bites by mosquitoes on the lines recommended against malaria.

Fingers, Affections of **373**

Apart from injuries, the fingers are subject to a number of diseases, some of which like the conditions known as "dead fingers" and "clubbed fingers"

will be found mentioned under other headings. The commonest is the inflammation which goes by the name of "whitlow" described under that head. Affections of the nails are described separately. The finger-joints are frequently attacked in the course of rheumatic and gouty diseases producing the deformities which are so common, especially in chronic sufferers. The bending of the fingers resulting from that curious affection called Dupuytren's contraction, is described under the latter term. Similar contractures occur in consequence of accidents which produce more or less extensive scars.

"Lock finger" is a peculiar affection of the fingers in which they become suddenly fixed in a bent position. The cause lies in the presence of small fibrous growths in the muscular sheaths. When these are removed a cure is generally effected, but not otherwise.

The hands and fingers are subject to many congenital abnormalities and deformities. Sometimes the abnormality lies in the number which may be either in excess or short of the normal. Then there is the condition known as "webbed fingers" or "*syndactilism*," in which adjacent fingers are joined to one another. Most of these conditions are amenable to surgical treatment.

Writer's cramp and similar nervous affections of the hands and fingers will also be found mentioned and described elsewhere.

The various diseases to which the skin generally is subject also attack that of the fingers.

First Aid **374—380**

For the sake of convenience and rapid reference I summarise here the instructions referring to the treatment of frequent accidents and many cases of illness of an urgent nature contained under the various and respective headings in this volume. For details, the reader sould turn to these or consult the Index, in case of doubt, as to where the subject in question is dealt with.

In *burns and scalds* the guiding principle should be to expose the injured parts to the air as little as possible and to cover them with protective greasy dressings, such as carron-oil (which consists of equal parts of lime-water and olive or linseed oil) and cotton wool.

A person in flames should never have water poured upon him, but be rolled on the ground and wrapped with coats, rugs, blankets or any similar object.

Where a person is struck by lightning or a severe electric shock, he should be wrapped in warm clothing and artificial respiration should be applied without delay. After that, he may have stimulants.

375. A *fainting fit* should be treated by placing the patient flat on the ground upon his back, by unloosening his clothes, especially round the neck, chest and waist, and letting him have as much air as possible. Cold water may be sprinkled on his face and neck, and if smelling salts are at hand they may be placed to the nostrils. It is not always advisable to administer stimulants of an alcoholic kind.

If the fit is an *epileptic* one, a twisted handkerchief or some other such article should be placed between the teeth, to prevent biting of the tongue, but care should be taken that the breathing is no interfered with. Nothing else should be done, except loosening the clothes and the adoption of measures to prevent injury to the patient or others.

If the person in a fit is known to be subject to *hysteria*, the less interest is taken in her—the victims being mostly young girls and women—the sooner she will come round.

A child in a *convulsive fit* should be immediately placed in a warm bath, with cold water sponging or bandages to the head and chest.

376. An acute seizure of *sunstroke* or *heatstroke* is to be treated like any other fainting attack, the patient being removed to a cool place immediately. Ice bags or cloths soaked in cold water to which some vinegar or eau de Cologne has been added should be applied to the head and chest, or even to the whole body. Some stimulant may be given on the return to consciousness, but not before the patient can swallow it.

Fainting after exposure to *severe cold* is of rare occurrence, but it happens in persons who are not in robust health. The treatment consists in promoting the re-establishment of the circulation by the use of warm blankets and brisk rubbing of the arms and legs. Hot water bottles or a warm bath, if available, are of much assistance. Warm nourishing food and rest in bed will complete the cure.

377. *Bleeding* or *hæmorrhage* from external injuries. That from an artery is the most dangerous form, and arterial blood can be distinguished from venous by its bright red colour, venous blood being dark in appearance and flowing in a continuous stream, whereas the arterial comes out in spurts corresponding to the beatings of the heart.

To arrest hæmorrhage from an artery, pressure should be applied on it either at the bleeding point or near to it, but between it and the heart. The pressure may be by means of the fingers or, better still by means of a pad fastened with a bandage which can be tightened by the twisting of a piece of stick passed through the loop. This is called a "tourniquet." Medical aid should be in the meantime sent for without delay, as the sooner the cut artery is ligatured, or tied, the better. Bleeding from a vein is not so serious as from an artery, and it can be arrested either by elevating the limb or by applying pressure in the same way either at the seat of the hæmorrhage or on a blood-vessel further from the heart.

Bleeding from cuts effected during *shaving*, if at all troublesome, may be arrested by pressure with a rag or sponge soaked in very hot water, to which a little alum has been added. Often, nothing else is wanted than the application on the bleeding spot of a tuft of cotton wool without any pressure whatever. This should be allowed to remain on for several minutes.

"*Capillary bleeding*" in which the hæmorrhage is in the form of a general oozing from a bigger or smaller surface if it does not stop spontaneously within a few minutes is easily controlled by the application of ordinary bandage pressure or of some cold water.

378. In severe bleeding from the *nose*, mouth or ears, the ordinary measures having failed, recourse should be had to plugging the cavity with lint or cotton wool soaked in a solution of weak vinegar, alum or tannic acid. Sometimes nose bleeding continues even after plugging of the nostrils, in which case a doctor must be sent for so that he may effect a plugging through the cavity of the mouth or take other steps.

A person bleeding from the nose should sit in a chair with the head

well back and the mouth open. He should raise his arms over his head. A cloth wrung out in cold water or some cold substance, for instance, a key, should be applied to the neck. Some astringent solution, like vinegar and water or alum, may be passed into the nostrils.

Hæmorrhage from the *lungs* or *stomach* should be treated by rest in the recumbent position, with the head and shoulders propped up with pillows. Pieces of ice should be swallowed or allowed to dissolve in the mouth. There should be as little movement as absolutely possible. Cloths wrung out of cold water, or ice bags, should be applied to the chest or over the abdomen. No talking to be permitted.

Sudden severe hæmorrhage from the *rectum* is generally the result of a burst pile. Treat with cold water applications and rest in bed.

Internal hæmorrhage, evidenced by the patient's extreme pallor and collapse, is of the greatest seriousness. Place the sufferer in a recumbent position with the clothes unfastened, and send for a doctor.

379. In the case of a *fractured* limb, the first thing to be done is to fix it, unless there is hæmorrhage, which must always be arrested immediately. Splints for fixing a broken leg can be improvised from walking sticks, umbrellas, pokers, etc., and a triangular bandage or a sling for the support of a broken arm may be formed from a square piece of calico or other material doubled diagonally across.

The clothes from a broken limb should be cut off at the seams, and stockings should be cut, not pulled off. If only one leg is broken, the sound one may be used as a splint and the two limbs tied together.

It is always preferable to remove a person who has suffered a fracture of any kind, on a stretcher, even if it is one of a primitive kind improvised from a blanket and a couple of long sticks or poles.

Dislocations and sprains should be treated as fractures until the doctor arrives. Avoid manipulations as much as possible.

The points to be aimed at in resuscitating those who are apparently dead from *asphyxia*, including *drowning*, are first and immediately, the restoration of breathing; and, secondly, after breathing is restored, the promotion of warmth and circulation.

The efforts to restore life must be persevered in until the arrival of medical assistance, or until the pulse and breathing have ceased for at least an hour.

To promote *artificial respiration*, the following is the method to be employed: Place yourself at the head of the patient, grasp his arms, raise them upwards by the sides of his head—the patient, of course, lying on his back—stretch them gently and steadily upwards for two seconds. This is the movement of inspiration.

Next, to induce expiration, immediately turn down the patient's arms and press them—or your own hands—gently against the sides of his chest for two seconds.

Repeat these measures perseveringly fifteen times in a minute until you observe spontaneous efforts of respiration.

380. If a person is found *hanging*, the body should be cut down immediately, and artificial respiration tried without a moment's delay.

Informing the police can wait, and is not, as ignorant persons believe, the first duty of a law-abiding citizen.

Choking through entrance of food or some other substance "the wrong way" is to be treated by inducing vomiting and coughing. Thumping on the back is an efficient old remedy which usually dislodges the offending article. Tickling the back of the throat is another method, but care should be taken to prevent biting of the tickling finger. In extreme cases the operation of tracheotomy may become necessary.

The general principle in cases of *poisoning* is to give first of all an emetic or use the stomach pump in order to remove the poison still in the stomach. Where this is impracticable or has already been done, the next step is to deal with the case according to requirements, that is, apply restoratives, external warmth, artificial respiration, etc.

Emetics nearly always at hand are a finger for tickling the victim's palate with, in order to make him vomit, a feather to be used similarly, a draught of warm water, dirty water with which household articles have been washed, a spoonful of salt dissolved in warm water, the same quantity of mustard, also in warm water, etc. As mentioned under the heading "Poisons and Antidotes," emetics are dangerous in cases of poisoning with caustic or corrosive substances.

Fissures **381**

Fissures are longitudinal ulcers, cracks or abrasions of the skin near where it joins a natural opening, like the mouth or anus. In the latter named locality, fissures are apt to be exceedingly painful especially during evacuation. Often they accompany or are caused by hæmorrhoids. The treatment consists in regular attention to the bowels and application of soothing lotions, such as lukewarm boracic acid solution or weak glycerine of alum or of zinc ointment or ordinary vaseline. Sometimes dilatation of the anus with the finger eases the pain considerably. In obstinate cases a surgical operation may become necessary.

Fissures of the nipple and of the breast generally are common in women, especially when suckling a baby. They can be prevented as a rule by care and cleanliness. When they occur, nevertheless, a shield must be used and the nipple washed with water which has been previously boiled, to which may be added a little whisky or brandy. Dusting with talc powder is also advisable. Almond oil is a good soothing application when the nipple is sore. In severe cases if both nipples are affected, the question whether the baby ought not to be weaned requires taking into consideration.

Fistula **382**

A fistula is an abnormal communication between an internal cavity and the surface of the skin, or between two internal cavities. A common example of the former kind is the fistula at the lower end of the bowel, known as fistula of the anus or anal fistula. Such a fistula also occurs occasionally on the cheek through the bursting outwards of an abscess under a tooth. Fistulæ of the second kind occur mostly between the lower end of the bowel and the bladder, or, in women, between the bladder and the vagina. A fistula is said to be complete when it has two openings, an internal and

external; if there is only one opening, either internal or external, the fistula is called blind or incomplete. If an incomplete fistula opens on the surface, it is also called a *sinus*. Such sinuses are seen commonly in association with tuberculosis of the bones.

The most constant symptom of a fistula is a discharge of thin pus, with or without the admixture of some blood, and there is generally also some inflammation present. No other treatment but surgical interference is of any good, and the operation is often succeeded by a discharge which may last for many months.

Fistula of the anus is a common occurrence in consumptive subjects. In itself it is not a very dangerous complication, as long as the discharge takes place outwardly.

Flat Foot (Pes planus) 383—384

This common deformity of the foot is seen especially in young persons who have to stand a great deal or carry heavy weights, such as errand boys, nursemaids, etc. It consists of a relaxation of the ligaments in consequence of which the arch of the foot sinks and the whole sole comes to rest on the ground. The symptoms of flat foot are a constant tired feeling, and a sensation of pain in the feet when standing or walking, a shuffling gait, frequent cramps in the legs, with more or less stiffness and excessive perspiration of the feet with an accompanying disagreeable odour. An inspection of the boots will generally show that they are worn away more at the inner than the outer borders.

In those who have suffered from rickets during childhood flat foot is more likely to occur than in others. An inclination to rheumatism is also sometimes a contributing factor. Sometimes heredity appears to play a part, an entire class of persons, as, for instance, the negro race, occasionally show a marked tendency to flat foot. A long foot is more likely to become flat than a short one. Unsuitable footwear, especially tight or narrow-toed boots, help in producing the deformity.

There are several degrees of flat foot. In the early stages there may not be more than slight sinking of the inner border of the foot, which if attended to at once will prevent development of further stages. In these the person may actually walk on the inner edge of the foot only, so that the inner ankle is quite close to the ground and the foot looks outwards, an condition known as *pes valgus*. (*See* "Club-foot.")

384. The treatment if commenced early enough and carried out with perseverance is generally attended with good results. It consists of precautions in the manner of walking, suitable exercises, manipulations, and the wearing of instep arch supports inside the boots. The person concerned should try to walk on the outer side of the feet, he should frequently rise on the toes with the great toes touching one another, and the heels directed outwards, he should with his boots off stand on the balls of the toes, the latter being directed straight forward, for ten minutes at a time, twice daily.

If at all possible an occupation should be chosen which will permit much sitting down.

In more advanced cases the legs and feet should be bathed in sea water and rubbed gently once or twice a day. Proper boots with broad heels and square at the toes should be worn, and exercises of a more complicated nature practised, such as flexion and extension of the toes, circumduction movements with the feet, etc.

If these measures are not successful there remains nothing but a surgical operation, the nature of which will depend on the circumstances of each case. It is of interest to mention that an acute form of flat foot occurs sometimes in older people, for instance in stout women.

Flatulence 385

By flatulence we understand an excessive production of gases in the stomach and intestines resulting from undue fermentation or decomposition of food. The popular term "wind" expresses the condition very well. One speaks of flatus or intestinal flatulence when it commences some time after food has been taken, and there are no other signs of indigestion. When this is the case, the trouble is seldom more than an inconvenience, occasioned by the involuntary noises in the abdomen known as borborygmi.

In dyspeptic or gastric flatulence accompanied by belching or eructations, the cause lies in indigestion, pain or discomfort, which is occasionally felt in the back, being present immediately after eating.

Flatulence is common in neurasthenic persons, many of whom suffer from what is called nervous dyspepsia, in elderly people and also in those who are generally in delicate health. Constipation is, of course, a common cause of flatulence and so is disease of the liver. The main lines of treatment consist in attending to the possible cause of the flatulence. The diet must be studied carefully. Tea, coffee, pastries, green vegetables and other indigestible articles must be avoided. All food must be masticated thoroughly, indeed some are of the opinion that insufficient mastication is the one and only cause of flatulence.

The use of carminatives, including ginger and mustard, is beneficial in the gastric form of flatulence, whilst in the intestinal form it is preferable to employ remedies which counteract fermentation, namely bismuth lozenges, charcoal biscuits, or charcoal in powder, tabloids of sulpho-carbolate of soda or soda-mint, etc., to be taken before meals. Creosote capsules are another excellent preparation against flatulence. In some cases a liquid mixture is preferred, and the following prescription will answer: Sulphocarbolate of soda 32gr., bicarbonate of potash 48gr., compound tincture of cardamon 2dr., glycerine 32 minims, chloroform water to make up 4ozs. One tablespoonful to be taken before meals two or three times daily.

Fogs, Injuriousness of 386

Since it has been demonstrated beyond doubt that fogs have a depressing effect and that foggy weather diminishes considerably the chances of patients who suffer from any disease, it is not out of place to mention the subject in this volume, at any rate as one of the causes which tend to produce or aggravate illnesses, especially in persons subject to affections of the lungs and throat. Such persons should therefore, if their circumstances permit it, avoid localities where fogs, particularly black fogs, prevail, or at least never go out without wearing a respirator over the mouth.

Perhaps I may also give expression to the hope that the campaign against the black smoke nuisance will achieve the desired result, for the less black smoke there is about the less fogs develop.

One of the curiosities in connection with fogs is the circumstance that some asthmatic sufferers feel at their best in

a thick London or Manchester fog. I do not wish this to be interpreted, however, as a suggestion that fogs are a method of treating asthma successfully.

Fomentations **387**

Fomentations are applications of heat and moisture to a part for the purpose of reducing pain or inflammation. They may take the form of cloths, preferably flannels or sponges, wrung out of hot water or some medicated solution or that of a poultice. The latter has the advantage that it retains the heat much longer and does not need to be changed so frequently as a fomentation, but a fomentation is preferable on account of its simplicity of preparation and its lighter weight. The fomentation should not be applied before it is quite dry, or else it may scald the skin; as an additional precaution a piece of muslin may be placed between the skin and the fomentation. If it causes pain or discomfort, it must be removed at once. If there is an open wound, fomentations must be used very cautiously and warm boracic lint is then a suitable application. To relieve pain a few drops of laudanum or turpentine may be sprinkled over the fomentation. Poppy heads and camomile may be used for the same purpose, after being crushed, boiled in water and the solution afterwards strained. Covering a fomentation with a piece of oil-silk or thin mackintosh causes it to retain the heat and moisture much longer. Roughly speaking, fomentations need to be renewed about every hour. (*See also under* "Poultices.")

Foot and Mouth Disease **388**

Though rare in man, this disease occurs occasionally in human beings during epidemics among animals. It takes the form of an inflammation of the mouth and lips, with vesicles containing yellowish serum, similar eruptions appearing on the skin in various parts, especially of the fingers and toes, and on the nipples, in women. Feverishness and general indisposition accompany the outbreak. The treatment must be directed first towards prevention. When the mouth has become inflamed the necessary steps should be taken. (*See* "Aphthæ.")

Foreign Bodies, Swallowing of **389**

This is a frequent occurrence among children and causes at times much alarm. As a rule the substances swallowed (coins, marbles, etc.), make their exit in the natural way within 24 or 36 hours, and unless very large or pointed, they cause no pain and very little discomfort. The best way to hasten expulsion is to give dry, bulky and solid food, such as bread, potatoes, rice, etc., which forming large masses will carry the foreign article along with it. Should constipation result, a dose of castor oil is the best aperient. If there is delay in the expulsion of the swallowed substance, an X-ray examination should be undertaken, and if there is danger in allowing it to remain in its place an operation will have to be performed for its removal.

These remarks do not, of course, apply to the cases of foreign bodies entering into the windpipe and causing choking. They must be removed immediately, as mentioned under the heading "First Aid."

Fractures **390—392**

The following points help to distinguish between a fracture and a sprain or dislocation. In the former there is crepitation—or grating

between the broken ends of the bone—in the latter there is none. A broken limb shows unnatural mobility; in a dislocation, the limb tends to be rigid. A fractured limb is easily set but difficult to retain in the set position; a dislocation is difficult to reduce, but when once reduced it remains so. When a broken limb is turned round it moves as if it consists of more than one piece, a dislocated one moves as one piece.

A fracture is treated by rest, retention of the broken parts in their position after setting, by the application of splints and bandages and by the use of various extension apparatuses to prevent shortening of the limb or other deformities.

Since the introduction of the X-rays into surgical practice, a great change has been effected in the treatment of fractures, and in many cases operations are now performed which in former days would not have been thought of, with the result that the utility of broken limbs is secured more rapidly and more satisfactorily than before. An examination with the X-rays not only reveals the presence or absence of a suspected fracture, but also whether the fractured limb is properly set or likely to cause trouble in the future. When this is seen to be the case, the necessary operation can be done before it is too late.

391. Within recent years a new method of treating fractures by massage and movement instead of by rest and splints has come into use, and many doctors find it much more successful than the old one. Still, this is a matter of personal predilection and experience and each medical man will adopt the plan with which he is more familiar, or in which he has most faith.

For purposes of first-aid, which after all is the only assistance that can be rendered by a layman, it is sufficient to observe the directions given under that heading. The rest must be left to the doctor.

A fracture generally heals within a few weeks. Some bones take longer than others, those of the lower limbs for instance requiring as much as eight weeks or longer, whilst those of the arm take from three to six. A broken finger heals in about a fortnight; on the other hand fractures of the hip may not heal for several months.

Fractures may occur not only through some violent accident or injury, but also through abnormal muscular contraction.

In old and delicate people fractures heal with difficulty and sometimes not at all. One speaks then of ununited fractures.

392. Apart from the pain and swelling as well as the loss of function of the affected limb, fractures may give rise to a number of serious complications, including shock, delirium, etc. The difference between a simple and compound fracture has been explained under the heading "Bones, Diseases of."

A *comminuted* fracture is one in which the bone is splintered. If the fracture is through the entire bone, it is called *complete*, otherwise *incomplete*. A *dentate* fracture is one in which the ends of the fragments are so toothed and interlocked as to prevent displacement. A *depressed* fracture of the skull is one in which the broken part is below the normal level. A *double* fracture is the presence of two fractures in the same bone or the simultaneous fracture of two long bones, as in the lower arm or in the leg. In a *greenstick-fracture*, one side of the bone is broken or split, whilst the other may be bent. This

form occurs frequently in children on account of the comparative softness of their bones.

Colles' fracture is a fracture of the lower end of the radius (the outer of the two bones forming the lower arm) and *Pott's fracture* that of the fibula (the thinner and outer bone of the leg) about three inches above the ankle-joint. These two fractures are very common incidents.

Freckles (Lentigo) 393

No treatment is required for this well-known minor complaint unless it causes marked disfigurement. In milder cases freckles may be prevented by wearing brown or red veils as a protection against the rays of the sun, and an improvement will also be obtained from the use of olive oil smeared over the face at night. Other remedies are: Cold cream, glycerine, lime-water, a mixture of equal parts of alcohol, and rose-water, haze-line cream, lanoline, etc. (*See* "Sunburn.")

In severer cases the object of the treatment is to produce shedding of the epithelium covering the skin which contains the excess of pigment, and the application generally used for that purpose is a lotion of corrosive sublimate of 1 per cent. strength in alcohol used daily or every other day until an irritation appears. Sometimes a lotion of vinegar and water of variable strength achieves the same end. But these applications must be used carefully so as to prevent the formation of scars.

Chloasma is that form of freckles or pigmentary discoloration which one sees frequently in "liverish" people (hence the name "liver-spots") especially on the forehead. As the condition is, as a rule, more or less temporary and associated with transitory causes, treatment is seldom necessary. Where it is required, the remedies named above may be tried. In obstinate cases, electrolysis sometimes gives satisfactory results.

Frost-Bite 394

Prolonged exposure to severe cold may cause apart from local injuries —such as chilblains—general constitutional symptoms and even collapse. The treatment should be directed to re-establishing the circulation by dry friction and warmth, though the latter must be applied cautiously and in easy stages. If gangrene occurs, unfortunately a common result, amputation or other operations become necessary.

Gait 395

The gait or manner of walking is sometimes a valuable indication of the state of health of an individual as well as a definite symptom of some diseases. The firm gait of the robust adult, the dragging gait of the chronic invalid, the listless gait of one who is in pain, the laboured gait of the gouty or rheumatic sufferer, the unsteady gait of the alcoholic subject or drunkard, the slow gait of the hypochondriac, the rapid gait of the irritable neurotic—all these are easily noticeable.

I might also mention the so-called "ataxic" or "tabetic" gait, a prominent symptom of locomotor ataxy. The foot is raised high, thrown forward and brought down suddenly to the ground, the whole sole striking against it. The "spastic" gait of some forms of paralysis consists in the legs being held close together, whilst they move stiffly forward, with the toes tending to drag and catch against one

another. In the "cerebellar gait" the motion is staggering.

An abnormal gait is in many cases a peculiarity of the individual, acquired or congenital, or the result of disease or injury. The treatment of the gait as such is, of course, a point which hardly ever arises.

Galactagogues 396

These are remedies used for the purpose of producing a better flow of milk in a suckling mother where it is deficient. In a number of cases a diet rich in milk and milk foods is all that is wanted. This may be supplemented if necessary by the application to the breasts locally of warm fomentations or of an infusion or decoction of castor-oil leaves, or of the leaves, after being boiled, as a poultice. Some also recommend such a decoction for being taken internally, but it is doubtful whether this is of any real service.

Malt liquor has a reputation of being a powerful galactagogue, but it has its drawbacks that it may induce the alcohol habit in the mother and produce alcoholism in the suckling baby. Cases of the latter kind are not unknown, and it has often been asserted that the practice is responsible for dipsomania in after life.

Malt extract is therefore a preferable article especially in combination with tonic foods, or iron preparations.

But the most useful galactagogues will, after all, be found in the application of the baby to the breasts, and in a diet rich in fats and animal food with reasonable consumption of water.

Galactocele 397

What has been said under the heading "Cyst" generally applies to galactocele in particular, this being a cyst which contains milk more or less altered in character and resulting from some obstruction which prevents the natural outflow of the fluid. If the galactocele does not cause a complete arrest of the lactation, nothing is to be done until weaning has taken place. Then the proper course is to have the swelling incised and the contents evacuated, palliative measures such as tapping or fomentations being, as a rule, insufficient. A galactocele may, however, turn into an abscess and then it must be treated as such.

Galactorrhœa 398

This term denotes an excessive secretion and flow of milk whilst suckling, and also a continued dribbling of milk after the child has been weaned. In the former case, the breasts should be relieved by the use of the breast-pump and a supporting bandage worn. It is not advisable to use drugs either internally or externally.

Galactorrhœa is, however, much more frequently complained of when the period of lactation is over, and then it is customary to apply as a remedy externally some glycerine of belladonna, which is rubbed into the breasts gently several times a day. Internally, potassium iodide is of much help in doses of 5 or 10 grains twice or three times daily after food. Antipyrin is another drug used in such cases.

Severe galactorrhœa during lactation necessitates the immediate weaning of the child, otherwise the drain on the mother is so great as to endanger her health permanently. Indeed a condition similar to diabetes—called mammary diabetes—may result.

Gall-Bladder, Diseases of 399—400

Diseases of the gall-bladder, particularly gall-stones (*cholelithiasis* or biliary calculi), occur very frequently. Their principal symptoms are pain at the pit of the stomach radiating towards the right side or through the back towards the right shoulder, and more or less pronounced jaundice. Small gall-stones are often passed through the bowel without causing any serious trouble, but larger ones give rise to the condition known as " biliary colic." The pain is very intense and even agonising, especially if it sets in even agonising, especially if it sets in suddenly in the night. The patient is almost bent double and pale or quite collapsed. Shivering may occur, and even convulsions not unlike those of epilepsy. Profuse sweating and vomiting are other common symptoms.

If the stone passes out into the bowel the pain subsides, but if it gets impacted —or fixed—the pain continues in a more dull form and the patient becomes permanently jaundiced.

Such attacks may occur at long intervals or in quick succession, and various complications may set in, such as enlargement of the liver, inflammation of the gall-bladder (cholecystitis), obstruction of the bowels, abscesses in the gall-bladder, and so on.

400. A biliary colic attack is best treated by placing the patient in a hot bath or by applying hot fomentations or poultices. If a doctor is sent for he will most likely immediately administer an injection of morphia to arrest the terrible pain.

The after-treatment consists in attempting to prevent the formation of further stones. This is chiefly accomplished by a proper diet which must be limited in amount and contain very little starch and fat. The patient should drink abundantly, especially such alkaline waters as those of Vichy, Kissingen, or Carlsbad, but very little alcohol, and take frequent and large doses (from 20 to 30 grains) of sodium bicarbonate. Olive oil is also found useful in many cases. A preparation known as chologen—said to contain mercury and podophyllin—has been employed lately for the same object. It can be taken in the form of tablets twice or three times during the year for a period of about three months at a time.

Exercise should be indulged in freely, constipation must be avoided and no tight clothes or corsets should be worn. Where circumstances permit, the cure at Carlsbad taken every year is almost an infallible preventive of gall-stones. If in spite of these precautionary measures attacks keep returning or the jaundice is persistent an operation becomes necessary soner or later.

Ganglion 401

This is the name given to swellings in the neighbourhood of joints or tendons, as for instance on the back of the wrist or on the upper part of the foot over the toes, which are of soft consistence, being filled with a jelly-like substance. They vary in size from a pea to a pigeon's egg. Sometimes they appear after a strain, as for instance in girls learning gymnastics, or in older women after a heavy washing. They do not as a rule cause much pain. The best way to remove a ganglion is to have it excised, though some doctors prefer to crush them with a blunt instrument or the back of a book, when, however, they frequently return.

Sometimes it is sufficient to paint the swelling with tincture of iodine

every other day, and to wear over it a pad and firm bandage.

A ganglion is not a dangerous complaint, though it may be accompanied by a certain amount of weakness in the joint, and if the disfigurement is slight, no interference is necessary.

In the anatomy of the nervous system the term "ganglion" is used to describe certain collections of nerve-cells forming subsidiary nervous centres. The best known is the "Gasserian ganglion" situated near the base of the skull and upon which operations become sometimes necessary for the relief of obscure cases of facial neuralgia.

Gangrene **402**

Gangrene or mortification is the process by which a large mass of tissue—or a whole limb—dies through the stoppage in its blood supply. In dry gangrene the part "sloughs" away; in the moist variety it becomes a sodden, decaying mass. The chief danger of gangrene is that it may set up general blood-poisoning. To avert the latter, the operation of amputation frequently becomes a painful necessity. Diabetes is a very common cause of gangrene, but usually it follows severe and extensive injuries, or some disease of the blood-vessels themselves. Gangrene is also seen very often in delicate old people—the so-called "senile gangrene."

The use of strong lotions of carbolic acid may cause extensive gangrene. Gangrene also results from exposure to severe heat or cold or the unduly prolonged application of a ligature round a limb. The form of gangrene known as Raynaud's disease is referred to elsewhere, and for that known as septic gangrene. (*See under* "Septicæmia.")

The treatment of gangrene is necessarily surgical all through, the nature of the operation demanded depending on the extent of the mischief. When an amptutation has to be performed it is usual to wait for the formation of a "line of demarcation" which separates dead from living tissue, unless the life is in danger through general septic poisoning, in which case no time must be lost.

Medical assistance should be obtaned at the earliest possible moment, no matter to what cause the gangrene is due. Many lives are sacrificed through neglect in this respect.

Gastralgia **403**

A form of neuralgia of the stomach occurring in paroxysmal attacks at irregular intervals, independent of meals. The pain suggests either cancer or ulcer of the stomach and it is not always easy to exclude these two more serious diseases. The chances are that the cause of the attacks is neuralgic when the patient is a young and neurotic or anæmic woman, when food does not increase the pain, when the pain is over a large area instead of being localised in a small spot, when pressure relieves the pain instead of adding to it and when the vomited matter—if any—does not contain any blood.

The treatment of attacks of gastralgia consists in the application of hot fomentations sprinkled with laudanum or turpentine, or the use of an electric battery. Between attacks the patient should be seated on the lines laid down for cases of neuralgia generally.

Gastritis **404**

Gastritis means an inflammation of the mucous lining of the stomach,

which may result from a variety of causes, such as eating indigestible or decomposed food, acute poisoning, the use of certain drugs or other substances, etc. The acute form of gastritis, sometimes spoken of as gastric fever, shows itself by pain in the region of the stomach, sickness and vomiting, great thirst, headache, general depression, a high temperature, and other signs of feverishness, the condition lasting about four or five days. The treatment consists in the administration of an emetic and the withholding of food until the latter can be retained. Then the diet must be chosen carefully, a beginning being made with liquids only. Hot applications to the abdomen will relieve the pain. (*See also under* "Indigestion.")

The chronic form of gastritis (chronic gastric catarrh) is really indigestion, and results from abuse of alcohol, or tobacco, repeated attacks of acute gastritis, continuous errors in diet, insufficient mastication of food, or it may accompany organic diseases of the stomach or other parts, including diabetes, gout, kidney disease, syphilis, etc. Chronic gastritis often simulates cancer or ulcer of the stomach, and the diagnosis presents difficulties. The treatment, apart from diet and attention to the bowels, consists in washing out the stomach at frequent intervals, and removal of the cause if possible. A flannel abdominal bandage is of much benefit. One or other of the following mixtures may be given a trial: (1) Tincture of nux vomica 4drs., fluid extract of cascara 3ozs.; glycerine to make up 6ozs. One teaspoonful to be taken at night time. (2) Pepsin 2drs.; dilute hydrochloric acid 3drs.; simple syrup 1oz.; water to make up 4ozs. One teaspoonful to be taken during or after meals. (3) Oxalate of cerium 2½drs.; carbonate of bismuth 2ozs.; light carbonate of magnesia 4ozs. A teaspoonful stirred up in water, to be taken between meals and at bedtime.

Hydropathic treatment is often of the greatest value in cases of chronic gastritis, and where there is also a nervous element in the condition, a course of electric treatment promises excellent results.

General Paralysis of the Insane (G.P.I.) 405

This is one of the most frequent forms of insanity. It is also known as "paralytic dementia," and popularly spoken of as "softening of the brain." The symptoms come on very slowly and progressively, the first to appear being of a moral or intellectual kind. The patient is noticed to have become careless in his habits, or to give way to intemperance. Or he may show signs of irritability or bad temper. From having been an affectionate husband or father he becomes the very reverse, or extremely jealous.

At the same time the patient commences to show signs of physical degeneration. The first is generally trembling of the tongue, or of the lips or hands. He assumes an uncertain gait. He finds difficulty in pronouncing words of more than one syllable. He cannot guide his hand in attempting to write, and if he was previously a piano or violin player he finds that he can no longer play.

The next stage is that of delusion. The patient begins to imagine all kinds of things, especially about himself. He thinks he is the King, or the Prime Minister, boasts of enormous riches, throws money about (if he has any), or goes into shops and orders most expensive things by the dozen or the hundred.

This condition is known as megalomania.

By a gradual transition—and sometimes more or less suddenly—he becomes worse. He thus reaches the third stage, that of paralytic dementia. He loses his memory, gets weaker and weaker, cannot control the functions of the body, has perhaps convulsions; bed-sores form, and the inevitable end comes, generally in about two or three years from the beginning of the illness.

There are variations to the form outlined, but it is the one which is oftenest seen. Some diseases, like locomotor ataxy, have a resemblance to general paralysis, but only for a short time, as the former is much more chronic in its course.

The treatment of the disease is practically hopeless. Some cases, if taken in hand very early, may be arrested for longer or shorter periods, or they may improve a little by keeping from the patient all worry and anxiety.

In any case, the greatest care and vigilance are necessary, and as soon as the patient shows symptoms which may bring serious trouble to himself or others he should be placed under proper control.

German Measles **406**

This feverish disease which attacks mostly children, but occasionally also adults, is known under different names including Rötheln, Rubella, Epidemic roseola, French measles, German measles, etc. It is really a mild variety of measles, but it is usual to regard it as a separate affection, and many authorities are of the opinion that it is due to a different microbe than the one which produces measles.

The symptoms are practically the same as those of the latter illness except that they run a much milder course, so that any other treatment besides confinement of the patient to bed to prevent further infections is seldom necessary. Daily bathing or sponging with cool or lukewarm water relieves the discomfort of the feverish condition. Any existing constipation may be combated by small doses of calomel (one or two grains) or a teaspoonful of liquorice powder. The patient should remain isolated for about a fortnight. German measles, like measles, is not a notifiable disease to be reported to the sanitary authorities, but occasionally an order to that effect is issued to meet special contingencies.

Giantism (Gigantism) **407**

That giantism is not only an abnormal but also an unhealthy condition is fairly well known. Most giants—and probably all—are of feeble constitution and deficient in procreative power, as well as of dull and backward intellect. They do not, as a rule, live long, and though they consume enormous quantities of food and drink, they grow weaker and weaker once they have reached maturity, and nothing can be done to add to their strength, or to save them from early death.

The cause of giantism is not known, and it is particularly interesting that the condition is not, as one would expect, hereditary, occurring but seldom in more than one member of a family. Scientifically, giantism is defined as general hypertrophy. (*See under* "Acromegaly.")

Giantism cannot be produced artificially, as some people believe, by excessive feeding, nor can it be stopped by drugs or other means.

Giddiness **408—409**

By giddiness—technically called vertigo, and popularly also dizziness or swimming of the head—we understand a loss of the function of equilibrium of the body, resulting in unsteadiness, an actual movement of the body itself or a sense of movement in surrounding objects.

Giddiness is produced in various ways. It is often caused by defective eyesight—so-called ocular vertigo—or by an affection of the internal ear, known as "Menière's disease" (which see); then there is the dizziness which is a very frequent symptom of derangement in the stomach. Sometimes interference with the circulation of the blood in the head by such a cause as a tight collar gives rise to attacks of vertigo. We also distinguish a nervous or neurasthenic form of dizziness, seen after severe intellectual strain. This kind of dizzziness occurs also after the immoderate use of alcohol, tobacco, tea, or coffee.

Dizziness is one of the symptoms of epilepsy, and may occasionally replace an epileptic seizure. The same thing may be said with regard to the dizziness in migraine. Dizziness is also seen occasionally in connecton with organic diseases of the nervous system, of the heart, and other organs. It is, for instance, a manifestation of locomotor ataxy, of hæmorrhage or tumour in the brain. Patients with arteriosclerosis are very apt to suffer from attacks of vertigo. Anæmic persons are similarly subject to them. Constipation and the presence of parasites in the intestines are other common causes of giddiness. That sea-sickness and its allied conditions, namely, mountain-sickness and air-sickness, give rise to dizziness is well known.

408a. Air-sickness played an important part during the great war, as it put out of action many members of the air forces, and it has even been given the special names of flying sickness" or "aviator's disease." It would appear, however, that the mental strain was more responsible for the symptoms produced than the high altitude in itself, as they are hardly noticeable in peace condtions to the same extent. Still the exhaustion and fainting attacks accompanying the giddiness suggest a want of adaptation on the part of the nervous system to the unaccustomed movements high up in the air.

409. Roughly speaking one may tell whether the giddiness is due to an affection of the eyesight or to severe organic trouble by closing the eyes. If the giddiness disappears or becomes less pronounced the chances are that the eyes want attending to; if it gets worse, the probability is that locomotor ataxy is present. Not too much reliance, however, must be placed on this test.

Seeing that giddiness results from so many causes, the treatment must naturally be directed towards the removal of the latter or at any rate towards minimising them as much as possible. Where this is found to be impracticable or impossible, a course of potassium bromide may be tried. It is taken in 5 or 10-grain doses with or without an equal quantity of potassium iodide two or three times daily after meals in a little milk or water.

Another efficient remedy in obscure cases of giddiness is sodium salicylate, especially in combination with gelsemium. The following is a useful formula: Salicylate of soda 60 grains, aromatic spirit of ammonia 120 minims, tincture of gelsemium 120 minims,

water to 6 ounces. One tablespoon three times daily after food.

But, as already stated, the cause must be looked for in the first instance, and when discovered treated accordingly, either by discontinuing injurious habits or adopting the necessary precautionary remedies. It is perhaps advisable to add that neurasthenic vertigo is neither rare nor dangerous.

Glanders **410**

This is a contagious disease produced by a particular microbe, the "bacillus mallei," and caught as a rule from infected horses or asses. Its symptoms are a profuse discharge from the nose, acute feverishness, swelling of the glands, pains in the joints and muscles, an eruption of pustules on the skin, and great general weakness. When limited to the skin and glands, the affection is spoken of as "farcy." The disease is now treated very largely by injections of mallein—one of the antitoxins mentioned in a previous paragraph—and the sooner the treatment is commenced, the better the chances of recovery.

Any abscesses occurring during the acute stage must be opened immediately and antiseptically treated. The patient must be isolated and great care must be exercised by those in attendance upon him.

Glands, Diseases of the **411**

The glands—or lymphatic glands, as they are correctly named—being distributed all over the body, they participate in the diseases of organs or parts near which they are situated, or they may be the seat of independent diseases. A familiar example of the former kind we have in "bubo," which is an inflammation of the glands (*lymphadenitis*) in the groin. A similar process takes place when the glands near an injury or a poisoned wound become swollen and painful.

Inflammation of the nearest glands also accompanies such conditions as a sore throat, a bad lip, inflamed tonsils, a gumboil, etc., and in children the glands behind the ears are frequently inflamed and enlarged in consequence of ringworm or the presence of other parasites in the hair—a circumstance well worth bearing in mind.

On the other hand, we often see the glands swollen everywhere, and especially under the jaws and at the back of the neck, without there being any part or organ specially affected. Formerly this used to be called scrofula, but this name is not in much use now, the condition being regarded as one of the manifestations of tuberculosis.

Small epidemics of an infectious fever in young children, characterised by enlargement of the glands at the back of the neck, have been described of recent years under the name "Glandular Fever," but it is still doubtful whether the disease is not an abnormal form of one of the older infectious fevers. The treatment is that adopted in the latter. (*See* "Measles.")

One form of general swelling of the lymphatic glands goes by the name of Hodgkin's disease (which see).

An acutely inflamed gland is best treated by rest and hot fomentations. If it turns into an abscess, it must be treated as such. As to the treatment of scrofula, see "Tuberculosis."

More or less chronic disease of the glands depending upon an affection of some neighbouring organ generally disappears on improvement in the latter, though often the glands remain permanently enlarged without, however,

causing any pain or inconvenience. This should not give rise to any alarm. It is usual to treat swollen glands by painting them frequently with tincture of iodine.

Goitre **412—414**

Goitre, called also Derbyshire neck or "Bronchocele," is a swelling of the little gland situated in the front part of the neck and the name of which is "thyroid gland." In health the latter cannot either be seen or felt, but when it swells it may assume enormous dimensions. The swelling may be either on one side of the middle line only, or on both.

Goitre is in so far serious as it may interfere with the breathing, and this becomes occasionally so alarming as to necessitate an operation.

The disease is prevalent in mountainous districts presumably where the water is very hard, though it is doubtful whether the hardness alone is the cause. There probably is something else associated with it—perhaps a microbe which we do not know as yet. Goitre is probably hereditary in the sense that it relates to members of families living in the same locality, and it is not infectious or contagious in the ordinary meaning of the term.

More women than men suffer from goitre; we cannot tell why.

There exists a form of goitre which in addition to the enlarged thyroid gland presents a bulging of the eyeballs outwards, so that the patient has a most striking appearance. The condition is known as Graves' disease, or Basedow's disease, or Exophthalmic goitre. Besides the symptoms named the patients suffer also from palpitation of the heart and shortness of breath. The causation of exophthalmic goitre is not known, but it is frequently associated with a neurotic temperament or uterine troubles.

413. The treatment of goitre consists in the application of tincture of iodine externally and, in suitable cases, the administration internally or potassium iodide or of the extract from the thyroid or thymus glands of sheep. But as urgent measures may have to be adopted at any moment it is desirable that patients with goitre should not be without medical attendance. At any rate, the first consideration is the removal of the sufferer to another locality, where the water is not hard—that is, where it contains very little lime or magnesia. This change of residence alone is often sufficient to effect a cure. Where it is impracticable the patients must not drink any water unless it has previously been boiled. They should also avoid as much as possible the carrying of heavy weights or the ascent of steep hills.

Some cases benefit from the internal administration of thymol in doses of one or two grains twice daily with a little oil. The X-rays also are useful sometimes.

414. Exophthalmic goitre is far more serious than simple goitre, and the patient requires freedom from excitement of any kind, and as much rest in bed as possible. The application of ice-bags to the neck and heart will relieve the acute symptoms, such as the palpitation or pain in the eyes—the latter being sometimes the only thing complained of. Potassium bromide in occasional 5 or 10-grain doses has the same effect. Electricity in some form or other renders good service in some cases. In others the X-rays or radium promise good results. The preparation known as

antithyroidine and other similar serum products answer occasionally very well, but often enough no other course remains but operative removal of the whole or part of the swollen thyroid gland. Where the patient is anæmic or feeble, tonics of iron and necessary hygienic measures show satisfactory results. For painting the swelling I have often used with a fair amount of success decolorized tincture of iodine.

Goose-Flesh **415**

A rough condition of the skin characterised by prominence of the follicles from which the hairs spring, and resulting either from sudden emotional causes, such as fright or shock, or from chronic irritation of the skin. The former is common in persons of nervous temperament, in the latter the cause of the irritation must be looked for—it will sometimes be found in the nature of the employment—and removed if possible. Frequent inunction with some emollient, like lanolin or cold cream, will help to diminish the inconvenience. On the whole "goose-flesh" or "goose-skin" is not a serious affection.

Gout **416—421**

There is still considerable difference of opinion among medical authorities respecting the causation and the manner of production of gout, but it is generally assumed that the disease arises from an excess of urates and uric acid in the blood owing to the richness of the diet or insufficient elimination of these toxic products from the system. (*See* "Uric Acid Diathesis.") In other words, gout is the outcome of an excessive consumption of certain foods, chiefly of animal origin, accompanied by a mode of life which does not encourage the organs of excretion, principally the skin and the kidneys, to perform their functions adequately. Every method of treating gout has, therefore, as its object the restriction of the formation of uric acid and urates and their elimination to as large an extent as possible.

Let us, however, consider first the symptoms and forms of gout.

In most cases gout shows itself first in the form of an acute attack in one of the great toes. There is pain, redness and swelling, and the skin is so sensitive as hardly to bear any touch. At the same time there is considerable general illness with more or less feverishness and disturbance of the digestive function. The urine is almost red, and shows considerable deposits of urates. When the attack subsides the patient feels well, but after a longer or shorter interval, there is another similar seizure, and this takes place again and again, being generally at its worst in the early morning hours. More joints become affected with the result that they undergo some deformity or other. Little swellings make their appearance under the skin in various places, as for instance, in the lobe of the ear. They consist of chalk-like deposits of salts of uric acids and other minerals, and are called "tophi."

417. There is a form of gout which goes by the name of irregular gout, and which manifests itself in disturbances in various organs of the body, including urethritis, which is in every respect like an attack of gonorrhœa, and may give rise to serious misunderstandings. Gout may also show itself in the form of eczema, asthma, or in other ways.

Rheumatic gout—called also rheumatic arthritis and "poor man's gout"

—begins as a rule in the joints of the hands and fingers, which become swollen, painful and stiff. The illness comes on much more slowly than the other kind of gout described above, and attacks a number of joints including those between the breast-bone and collar-bones. Deformities are exceedingly frequent in this affection.

418. The following are some of the points which distinguish gout from rheumatism. The former affects principally small joints, the latter, larger ones. The pain in acute gout is much more severe than in rheumatism, but in the latter the swelling is more pronounced. In acute rheumatism there is a great deal of sour-smelling perspiration, in gout this is the case only to a moderate extent. In chronic rheumatism the pain is continuous; in chronic gout it occurs in paroxysms. Attacks of gout are fairly regular in their periodicity, attacks of rheumatism come on very irregularly. Chronic gout, especially the form called rheumatic arthritis, is more often followed by deformities than chronic rheumatism, though these two affections are practically analogous in their symptoms. Heredity plays an important part in gout, but only a moderate one in rheumatism. There is also a more frequent association between gout and diabetes and gout and Bright's disease than between rheumatism and these diseases. Gout attacks as a rule persons of middle age and the male sex, especially those who live well and lead a sedentary life; rheumatism is equally common in young and old, in men and women, and more frequent in those who work hard and do not get sufficient rest.

419. As to the treatment of an acute attack of gout it is expressed in the formula: Time and cotton wool. The foot is to be wrapped in cotton wool after being painted with belladonna liniment and placed horizontally on a chair or couch, if the patient is not in bed. The diet must be restricted immediately to one of milk alone and alcohol withheld altogether. The favourite remedies are tincture of colchicum in 15 or 20-minim doses every four or five hours and a liberal supply of lithia water. If the pain is severe, it becomes sometimes necessary to give injections of morphia.

420. Chronic gout is to be treated more by attention to the diet and the bowels than by medicines. The food should be moderate in amount, and as free from so-called "purin bodies" as possible. Meat (beef, lamb, or mutton only) must be taken very sparingly, if at all, but fish (especially whiting, sole, plaice, or fresh haddock) may be allowed, as well as chicken. Green vegetables are permissible, but not boiled new potatoes, unless in great moderation. All sweets and pastries, new bread and cakes, should be abstained from, and saccharine should be used instead of sugar. All articles pickled in vinegar, all spicy and highly-seasoned dishes, preserved and potted foods, meat extracts, sausages, rich sauces, salted or pickled meats, stews, sweetbread, kidneys, liver, hare, venison, pork, ham, hard-boiled eggs, tomatoes, cucumber, beetroot, rhubarb, mushrooms, salmon, mackerel, eels, lobster, and crabs, etc., should be included in the list of substances to be avoided.

Where a stimulant is advisable it is best allowed in the form of good brandy or whisky well diluted with water. Exercise, baths, massage, and Turkish baths are very beneficial. The patient should drink Vichy or Carlsbad water, and also plenty of plain

water, hot or cold, sipped slowly, between meals. Weak China tea, freshly prepared, and cocoa are preferable to coffee, which should never be taken at night.

421. In rheumatic gout, the diet must be rather more liberal and even some alcohol is advisable. The patients should be warmly dressed and, if possible, live in a warm, dry atmosphere, or visit periodically such places as Buxton or Harrogate in this country, or Aix-les-Bains, or Wiesbaden abroad. Much benefit is obtained at times from painting the joints with tincture of iodine or from burying them in hot sand. In many hydropathic establishments electricity is applied with very satisfactory results. In others, the method of treating the joints by radiant heat, super-heated steam, or very high temperatures is meeting with great success.

Potassium iodide is a favourite remedy in all chronic gouty affections. It is given generally in doses of from 10 to 15 grains, swallowed with a little water. The following mixture will also be found very serviceable in many cases: Citrate of lithia 10gr., syrup of orange 30m., water to 2oz.; to be taken in a state of effervescence with 14gr. of bicarbonate of soda dissolved in 2oz. of water, twice or three times daily.

Gravel 422

This name is given to the sand-like material frequently present in acid urine in the form of a reddish sediment or deposit, and it forms the basis of stone in the bladder or kidney. Gravel is common in persons inclined to gout and uric acid diathesis generally. As long as it does not assume large dimensions and it is evacuated with the urine there is no danger, but as it may eventually lead to the formation of stones of various sizes, the condition is to be looked upon as a warning and the necessary steps should be taken.

Growing Pains 423

These are rheumatic or neuralgic pains in the limbs occurring during youth and due to various causes such as rickets at an earlier age, rapid growth or general malnutrition, but which are often enough a manifestation of real rheumatism. In the latter case the pains are accompanied by attacks of feverishness—hence the term "growing fever"—which, however, pass off without any bad results, except that occasionally bony swellings develop near the ends of the long bones. The treatment is on the lines of rheumatism generally, but nothing can be done to check the rapid growth of the children affected except letting them rest in the recumbent position as much as possible and giving them cod-liver oil. Young persons complaining of "growing pains" should be examined periodically by a doctor with a view to taking all possible measures against the occurrence of heart complications.

Hæmophilia (Bleeder's Disease) 424

This is a curious and not very rare disease, which consists in a tendency to alarming and long-continued loss of blood on the slightest provocation, such as a scratch, cut, or the extraction of a tooth. Sometimes the hæmorrhage seems to occur without a cause at all.

The affection is, as a rule, congenital and in very many cases hereditary on the mother's side, though the mother

herself may have been free from it. In other words, the heredity seems to go from maternal grandfather to grandchild, the male grandchildren being affected in larger numbers. Treatment is of no avail, though recently some cases have been treated more or less successfully by subcutaneous injections of blood-serum obtained from a healthy man. An American author reports satisfactory results from the employment of a substance called thrombokinase, prepared from sheeps' lungs. It possesses the quality of rapidly clotting bleeding points.

Operations even of a very slight character must be undertaken with extreme cautiousness where it is known that the patient is inclined to hæmophilia. This is a point to be borne in mind by Jewish families in connection wit the ritual circumcision of infants, several cases of bleeding to death having happened in this manner.

Hæmorrhoids 425—426

This disease known popularly as "piles" arises from a dilatation of the veins in the lower end of the bowel similar to that which occurs in the condition known as varicose veins. We distinguish internal and external hæmorrhoids according as the dilatation is inside or outside of the sphincter —the muscular ring in the anus. Cutaneous hæmorrhoids are pieces of skin attached to the margin of the anus. A predisposition to piles is acquired through a sedentary occupation and chronic constipation, especially if accompanied by over-indulgence in eating and drinking. Straining at stool, an enlarged prostate, difficulty in making water, as, for instance, in phimosis or stricture, are among other causes of hæmorrhoids.

To some extent the disease appears to be hereditary. More men than women suffer from it, the latter chiefly in consequence of pregnancy and childbirth, the former more through freer habits of living. The principal symptoms are a feeling of discomfort, especially when walking, itching, signs of swelling, pain during evacuation, and occasional loss of blood. This last symptom is present chiefly in internal piles, and is apt to assume alarming proportions. The protusion of the swellings, too, may cause at times most serious pain and inconvenience.

426. As to treatment, in most mild cases it is sufficient to eat sparingly, to abstain from alcohol and other stimulants, and to drink plenty of water. The patient should avoid sitting too long, and he should use in preference cane-bottom chairs or sit upon a ring-shaped rubber cushion. He must pay regular attention to his bowels, the mineral aperients—such as Carlsbad salts—being the best for the purpose. All straining at stool must be avoided and after each evacuation the parts should be cleansed with cotton-wool dipped in water, ordinary toilet paper being best avoided.

Bleeding may be arrested by cool sitz-baths, or injections of cold water containing a little alum in solution into the rectum, and by the introduction of such astringent remedies as ointment of gall and opium, hazeline, or suppositories of morphine and belladonna. These preparations are also useful in checking the pain and as lubricants for reintroducing the swellings into the rectum.

External piles are liable to become inflamed, especially after much walking, horse-riding, or cycling. This is spoken of as an "acute attack of piles." The patient should then stay in

bed for a few days, apply hot fomentations, and observe a very low diet. Compound cycloform ointment is a very useful preparation in these cases for the relief of the pain and itching. So is red precipitate ontment diluted by the addition of some white wax and olive oil.

While the hæmorrhage is severe, or the other symptoms not reliable by the above measures, an operation becomes necessary, and it consists in either ligaturing or excising the affected veins. Some doctors prefer the use of a cautery; others inject carbolic acid.

Hair Ailments 427—431

Though not dangerous to life, hair ailments cause as much worry and anxiety as some of the most serious diseases, the worst of it being that as often as not, one can do very little to mitigate them. The most frequent is *alopecia*, popularly known as baldness or premature loss of hair. This is supposed to arise from many and various causes, including heredity, severe mental effort, the wearing of tight hats, sudden shock, constant worry, a constitutional peculiarity, and so on. Severe illnesses, for instance syphilis and typhoid fever, are frequently accompanied or followed by great loss of hair. Then there are the cases due to parasitic or other diseases of the scalp, such as ringworm and eczema.

Recently the theory has been advanced and found much support that alopecia is a common result of a defective condition of the teeth. It has also been demonstrated that the wearing of a tight collar or neck-band causes the hair to fall through insufficient blood supply.

There are numerous remedies against alopecia. The one from which I have seen satisfactory results in stimulating the growth of the hair is a lotion consisting of vinegar of cantharides and rectified spirit, a drachm of the former to an ounce of the latter. It should be dabbed daily on the scalp with a small sponge. The following are also recommended, and where one of them fails, another may succeed: Ammonia liniment; camphor liniment; diluted tincture of cantharides; a mixture of carbonate of ammonium 40 grains, spirit of rosemary half an ounce, to 8 ounces of water; a mixture of expressed oil of nutmeg one part, to olive oil three parts.

Sometimes milder preparations, like eau de Cologne, or vinegar and water in equal parts, are sufficient. Shampooing the head occasionally with spirit of soap is also very beneficial. In baldness from constitutional causes and after long illnesses tonics are indicated, and a favourite one is compound syrup of hypophosphites in teaspoonful doses two or three times daily after meals. So as to prevent disappointment, it is necessary to mention that some cases of alopecia do not yield to any treatment whatever.

428. Alopecia areata, or baldness in patches, is a very troublesome and annoying complaint. Unless due to parasitic infection, such as ringworm, the cause lies probably in some disturbance of the nervous system. Most cases recover after a time. One of the remedies already mentioned—or the application of the electric current—generally brings about a cure, but the treatment must be persistent.

Excellent results in alopecia areata or general alopecia are sometimes obtained from the use of the following mixture: Fluid extract of jaborandi, tincture of cantharides and glycerine, half an ounce of each to one and a half ounces of vaseline. Apply with sponge

to scalp, morning and evening. Another preparation which has many admirers is that known as Pomade Max or compound ointment of cantharidin and mercury.

429. Premature greyness of the hair (*canities*), general or partial, is another frequent and annoying complaint. It is as a rule hereditary or constitutional. Sometimes it accompanies chronic diseases, like consumption or chronic neuralgia of the scalp. That the hair may become prematurely grey through worry and anxiety is well known, and it is equally well known that premature greyness may occur suddenly through severe mental shock or emotion. The treatment of premature greyness is on the whole unsatisfactory. In a few cases the application of preparations of cantharides to the scalp and the internal administration of tonics, containing tincture of nux vomica, arsenic, or syrup of hypophosphites are of some benefit, but as a rule no other course can be adopted than to leave things alone or else use a hair-dye.

The latter method should not be adopted unless it is absolutely necessary, for instance, when considerations of one's livelihood are at stake. The most frequently employed hair-dyes contain metallic salts, such as silver, mercury, lead or bismuth, especially the first-named which supplies black colouring reagents. The best results are obtained by soaking the hair first in a solution of sulphide of potassium and when it is dry to saturate it with a solution of nitrate of silver. The stronger the solutions the darker the hair will become and the colour remains fairly permanent.

Other hair-dyes include pyrogallol which gives a brownish tint, peroxide of hydrogen which colours the hair a bright golden hue, permanganate of potassium, dilute solutions of which will dye hair to a chestnut brown and strong solutions to darker colours, powdered henna leaves which are generally used in conjunction with indigo, in the form of a thin paste, and a number of others. They should be used very carefully by those who have no experience with them, as sometimes they leave most bizarre results, far worse than the original trouble.

430. I must also say a few words with regard to excessive growth of hair (hypertrichosis) and especially that common disfigurement from which so many women suffer, namely superfluous hairs on the face. There are so many unscrupulous individuals who exploit the natural desire of women to look their best, that it is as well to warn those who are subject to this blemish to be very careful in whose hands they get. Not only are they liable to emerge poorer in pocket, but with their health and outward appearance permanently and seriously injured.

The only fairly reliable method of treatment of this disfigurement is by the electric needle or the process of electrolysis, and even that is not always successful — especially if employed by a person without the necessary skill and experience. It has also the considerable drawback of being expensive and tedious, as no more than a few hairs—up to twenty—can be removed at one sitting. The various caustic applications are apt to leave behind a troublesome irritation of the skin.

Sometimes a good plan is to try rubbing the hairy parts of the skin with powdered pumice stone mixed with soap in the form of a paste or to bleach the hairs with a saturated

solution of peroxide of hydrogen. Recently the X-rays and radium have been applied with more or less success. When everything has failed, shaving must be resorted to.

431. Apart from parasitic diseases, such as pediculosis, favus, ringworm, and others, which will be found mentioned elsewhere, the hair is subject to various alterations in its appearance or in its structure, for instance, splitting of the individual hairs, either at their end or in the middle (which may be accompanied by little rounded swellings along the course of the hair, resembling nits), brittleness of the hair which causes it to break easily, leaving ugly-looking stumps behind, etc. These affections are, as a rule, a sign of poor health generally, and although they are practically incurable, they may be kept in check by the use of one or the other remedies named against alopecia and frequent trimming of the ends of the hairs. Tincture of green soap is a very good shampoo in such structural defects of the hairs. At the same time it is advisable to take internally some tonic containing iron, arsenic, or nux vomica—preferably by a doctor's prescription.

Hallucinations **432**

Hallucinations or illusions are false perceptions of one of the special senses, like the sight or hearing, for which there is no external cause, in other words, products of the imagination. They are not necessarily signs of insanity, though they indicate a disordered state of the brain. The hallucinations of delirium tremens are a familiar example. Noises in the head are not considered as hallucinations, unless they assume definite shape like voices or the sounds of musical instruments, when they are regarded as early signs of insanity.

Hammer-Toe **433**

A frequent deformity of the foot in which the second toe assumes a bent position through extreme flexion of the two furthest phalanges. It is commonly associated with a bunion and arises from the same causes as the latter, namely, crowding of the toes by pressure from ill-fitting boots. At first, hammer-toe does not produce much pain or inconvenience, but in later stages it may give rise to ulceration and make walking almost impossible. The treatment in mild cases is by mechanical appliances which straighten the toe. In severer ones, operations, including amputation of the toe, often become a necessity.

Hammerman's Cramp **434**

A spasmodic affection of the arm and hand occurring in those who use a hammer or similar implement to a considerable extent. The muscles feel contracted, but not necessarily painful. Obviously the only rational treatment of the condition is to refrain from manual labour.

Hands, Affections of the **435**

Most of these have already been mentioned under the heading "Fingers, Affections of," and in other sections. Here I will will first make reference to the condition known as "claw hand," a deformity which may result from injury before or after birth, or from a form of paralysis which causes wasting of the muscles of the hands and fingers. The name expresses the position which the hand assumes. The French call it "main-en-griffe," and the Germans "Affen hand" (monkey-hand).

The hands and fingers are subject to

all kinds of accidental injuries, dislocations, fractures, inflammations, abscesses, whitlows and tumours. Of the latter, the one known as ganglion, described separately, is very common. Next to it in frequency are small, rounded and hard swellings which proceed from the cartilages of the finger-joints, and are called enchondromata. Their removal is the only available treatment.

An excessive growth of the hand and fingers forms a part symptom of the condition described as acromegaly. It may become so pronounced as to render amputation imperative.

Hare-Lip **436**

This is a congenital malformation in which the upper lip is split on one or both sides of the nose. It generally extends as far as the nostril, and in most cases the palate, also, is divided —the condition being known as "cleft palate." Sometimes the latter is alone present and sometimes there are also other malformations, such as club-foot, etc. The malformation can be corrected only by a surgical operation.

Hay-Fever **437**

Hay-fever (or hay-asthma) is a most troublesome and annoying complaint which occurs in many people with almost clock-like regularity at the same period every year, especially in the early summer or in the autumn—and though there are several remedies against it which answer now and then in individual cases it cannot be said that there is a cure for it. The symptoms are really those of a severe "cold in the head"—a catarrh of the upper respiratory passages—namely, discharge from the eyes and nose, itching in the nostrils and in the throat, violent fits of sneezing, pain in the head, and a feeling of lassitude and exhaustion. There may also be much coughing and shortness of breath, as in asthma, and occasionally more or less deafness.

The cause of hay-fever lies in the inhalation of the pollen emanating from various plants—chiefly those of the grass-producing kind. The best treatment is therefore to remove from the locality to one where there is little or no vegetation—preferably the seaside. Where this is impracticable one of the following remedies may be tried, in addition to some tonic, such as syrup of hypophosphites, or iron with arsenic, and if one is not successful another may bring relief or a cure. Draw up into the nose a lotion of subacetate of lead and allow the fluid to return through the mouth. Brush the nostrils and the back of the throat with a solution of cocaine—about 5 or 10 per cent. strength. Spray the throat and nostrils with a solution of carbolic acid, about 2 per cent. strength. Inhale the vapour of benzoin or turpentine. Use Ferrier's snuff. Take one grain quinine three times daily. Suck eucalyptus lozenges, if the throat is relaxed. The latest remedies are the inhalation of adrenalin chloride and the instillation into the eyes and nostrils of pollantin —a serum prepared specially for the purpose, and a prolonged course of calcium chloride. The last-named has recently undergone a severe test and come out of it fairly successfully. The drug may be taken for months and years indefinitely without doing any harm, the general health as well as the local condition benefiting largely. It is suggested that a teaspoonful of a 20 per cent. solution of crystallised calcium chloride in distilled water be taken in a quarter of a glass of water during the three principal meals of the day.

Chronic sufferers from hay-asthma should not neglect to have their nasal passages examined, as sometimes the presence of a polypus which can easily be removed tends to aggravate or keep up the symptoms.

Headache **438**

Headache is a symptom of many conditions of ill-health, and it is therefore useless to treat it without trying to remove the cause. Among the latter are included: disease of the brain, such as tumour, abscess, inflammation, etc.; congestion—or overflow of blood—in the brain, following on heart disease, shock, or emotion, or resulting from such general diseases as anæmia or general debility; blood-poisoning of some form or other, including breathing of vitiated air in an ill-ventilated room; rheumatism of the scalp; chronic nasal catarrh; syphilis of the cranial bones; neuralgia, neurasthenia, hysteria and many others. That sickness is often accompanied by headache is well known. Constipation, too, is a frequent cause of headache, and so is over-indulgence in eating and drinking. In many cases the cause lies in some defect in the eyesight, or in temporary eye-strain, or mental over-exertion; in others bad teeth account for it; gout and uric acid diathesis are other common causes of headache. In short, it would mean enumerating a large number of diseases, of which headache is a symptom or a result.

Relief may be obtained very frequently from the application of hot compresses, unless a flushed face or red eyes denote a congested state of the brain. It is then better to apply ice or cold lotions, or bandages wetted with eau de Cologne. Sometimes, by holding the hands high above the head it is possible to reduce a headache considerably. In other cases rest in bed brings relief. Antipyrine, phenacetine, potassium bromide, etc. (of which the average dose is from 5 to 10 grains), are palliative remedies, which should be used with great caution as they sometimes produce symptoms of poisoning or general depression. In headaches of a nervous character, salophen in 10-grain doses three or four times a day is very useful. It may be taken in the form of powder or tablets. In rheumatic headaches aspirin is of considerable service.

A good dose of saline aperient will ease almost any headache at least for a while. Other aperients may be preferable in bilious headaches, and the following is a good combination: Calomel and compound rhubarb pill, 4 grains of each to 2 grains of extract of hyosciamus. Make four pills. One or two to be taken at night-time.

But, as already mentioned, the only rational treatment of headaches is to find out the cause and remove it.

Head-Nodding **439**

This is an affection seen as a rule in children, especially of a nervous type or the offspring of nervous parents, though occasionally one comes across older people suffering from it. The cause is rather obscure, though it is frequently found in rickets. In most cases the complaint disappears in a few weeks or months. In older people the chances of its disappearance are slender. Head-nodding is generally accompanied by nystagmus—or movement of the eyeballs from one side to the other. Apart from hygienic conditions no treatment is required.

Health Resorts **440**

It is always advisable when choosing

a health resort for those who are convalescent after an illness or suffering from a chronic disease, to consult a medical man. Much mischief is done by the omission of this simple precaution, for not all places suit all sufferers alike. Consideration must also be paid to the time of the year as well as the climatic conditions.

The principal British health resorts are Bath, suitable for gout and rheumatism; Buxton, where they treat these diseases as well as those of the nervous system; Cheltenham and Bournemouth, suitable for respiratory diseases; Harrogate for sufferers from skin diseases, gout, rheumatism, anæmia, dyspepsia, etc.; Droitwich, well known for its brine-baths against sciatica, rheumatism, and so on.

Of the many foreign watering-places, the best known are Carlsbad, particularly for diseases of the abdominal organs and diabetes; Marienbad, for obesity; Vichy, for diseases of the kidneys and bladder; Aix-les-Bains, for gout and diseases of the throat; Gastein, for nervous troubles; Kissingen, for gout and diseases of the stomach and intestines. Schwalbach and Nauheim, for heart diseases; Homburg, for habitual constipation; Ems, for asthma and chronic catarrh; Wildungen, for diseases of the bladder and the kidneys, etc., etc.

Seaside places are as a rule included among health resorts, but they do not always merit the description.

I must mention specially that for those in the early stages of consumption the best places are the high localities in and round Davos in Switzerland, the South African Highlands of the Cape Colony, the States of Colorado and New Mexico in the United States, the Himalayas and the Andes.

(*See under* "Climate, Treatment by.")

Heart, Diseases of the **441—445**

It is scarcely necessary in a book of this description to say much of diseases of the heart, which on account of their seriousness require the best medical skill obtainable from the very commencement of the symptoms; but in order that those who are interested in the subject may understand the better the information and instructions given them by the doctor, the following explanations appear in these pages.

First of all, doctors distinguish between functional and organic diseases of the heart. The former are chiefly of a nervous character and as a rule of a temporary nature with a tendency to recovery. The latter are much more serious and practically incurable. But when there is organic disease of the heart it frequently happens that there is along with it so-called "compensation" or enlargement of the heart which enables it to perform an extra amount of work to make up for that lost through the disease. The following are the principal organic diseases of the heart: Endocarditis or inflammation of the lining membrane of the cavities of the heart which generally leads to valvular disease, myocarditis or inflammation of the heart muscles; fatty degeneration of the heart substance known as "fatty heart"; hypertrophy or enlargement of the heart; dilatation or increase of the heart cavities with resulting thinning of the muscular walls of the heart; "heart-block," of which there are several varieties, including Stokes-Adams' disease. The latter has as one of its symptoms epileptiform convulsive attacks, and whilst serious

may last for many years if strain is avoided. The heart is also frequently the seat of congenital abnormalities.

442. When speaking of "valvular disease of the heart" we mean that the one or other of the orifices—or openings—in the heart through which the blood has to pass in the course of circulation, or of the valves which cover them, is diseased. There are several kinds of valvular disease, the most frequent being "mitral regurgitation" and "aortic regurgitation," or insufficiency. They give rise to certain "murmurs" in the region of the heart for which doctors listen when they examine that organ.

The most frequent causes of organic —including valvular—heart disease are rheumatic fever, other acute fevers, blood-poisoning, Bright's disease, severe strain and excessive muscular effort, gout, alcoholic abuse, etc.

The symptoms of heart disease are pain on the left side of the chest, palpitation, a very quick or very slow pulse, shortness of breath and swelling of the feet. In addition there may be other symptoms in various parts of the body. The patients are pale and anæmic, generally weak and liable to be attacked by all sorts of complications.

443. Palpitation of the heart—or an unduly forcible or frequent action of the heart visible or perceptible to the patient—is sometimes present as the only symptom, when it is as a rule of a functional character. It may be due to nervous excitement or worry, sexual excess, excessive smoking, or tea-drinking, excessive physical exercise or indigestion. Attention to the general health, avoidance of the cause, and abstention from stimulants are generally sufficient to effect a cure. An attack of palpitation may be relieved by the application of an ice-bag or cold bandage over the heart for a quarter of an hour or so.

Intermission of the heart's action (*arrhythmia*) also occurs occasionally through the same causes. Not only is the pulse slow, but the heart stops altogether for a second or so, causing a distressing or sinking sensation in the region of the heart. The symptom is as a rule not of serious import. (*See under* "Fibrillation.")

The very numerous cases of heart affection known by soldiers during the great war under the name "Irritable Heart" or still more under the initials "D.A.H." (Disorderly Action of the Heart) as distinguished from "V.D.H." (Valvular Disease of the Heart) belonged to this group, and were not for this reason considered of serious importance.

The heart is occasionally the seat of serious injuries or even complete rupture, but surgery has made such strides within recent years that it is now possible to open the heart and stitch it up almost like any superficial part of the body.

Many cases of sudden death occur through severe dilatation, or thinning of the walls of the heart to such an extent that they are liable to burst at any moment through a little extra exertion. In people with fatty degeneration of the heart, too, sudden death may occur through failure of the heart to respond to the calls made upon it. Aneurysm of the heart is another very serious disease for which little can be done in the way of treatment.

444. Pain in the region of the heart is not necessarily a sign of heart disease. It may be due to intercostal neuralgia, to flatulent dyspepsia, to false angina pectoris resulting from

excessive use of tobacco or to various other causes.

As regards treatment, I have already mentioned that heart disease does not admit of self-treatment. But in cases in which the diagnosis has been pronounced by a medical man, the patient can do a great deal to make life bearable or even comfortable and to avert for a long time serious complications or a fatal end. Whilst compensation, in the sense described above, exists, no drugs are necessary. All that is wanted, is a regulated mode of life free from over-exertion and excitement, avoidance of damp and of exposure to cold. Reasonable exercise is of advantage, and massage is sometimes a valuable addition. The so-called Nauheim treatment, consisting of baths and passive movements (Schott's method), which is carried out at many hydropathic establishments, is of great value, and so is the one known as Oertel's, consisting of a dry diet, avoidance of fats and starches, and graduated walking exercises. On the question of tea, coffee or alcohol, one cannot lay down definite rules. In most cases a little stimulation is needed, but care must be exercised not to throw thereby undue activity upon the heart.

If compensation begins to fail, rest in bed and a restricted diet must be resorted to, and it is then when drugs become necessary. The principal ones which doctors prescribe are digitalis, strophantus and caffein. Any complications arising are treated accordingly.

445. It is generally regarded as a bad sign when in a patient known to be suffering from heart disease, dropsy begins to show itself, and the urine at the same time contains albumen. Another unfavourable sign, which is, however, not so frequent, is the occurrence of large red patches on the skin in various parts.

That diseases of the heart owe their origin if not entirely at least partly to insufficient periodical rest may be taken for granted, and if people would only be more careful in this respect heart disease would be far less common than it is. One will realise the force of this remark by bearing in mind that two hours more in bed means in the course of a year the saving of as much muscular work to the heart as would raise 876,000lbs. of weight one foot, and that an hour's rest every Sunday would save the heart, annually, work equivalent to the raising of 62,400lbs. one foot. Running for trains and trams is a common cause of heart-strain, leading eventually to heart disease, and therefore a practice fraught with extreme danger.

The heart is subject to a number of special diseases, tumours, malformations and displacements, as mentioned under other headings.

Heartburn **446**

Heartburn is a well-known symptom or result of many forms of indigestion, and consists of a hot sensation or pain in the region of the stomach, accompanied by eructations—or belchings—of a sour character. The treatment must be directed to the removal or cure of the indigestion, but relief for a longer or shorter period may be obtained by taking a little bicarbonate of soda—about half to a teaspoonful, dissolved in some water, either before or after meals. Soda-mint tabloids or bismuth lozenges are also useful.

Heat Exhaustion or Heat Stroke **447**

I have already dealt with this subject under the heading "First-Aid." Here I will therefore only mention

that in hot countries a common contributory cause of heat exhaustion is to be found in alcoholic excess, and that slight recurrent attacks of dizziness should be regarded as a warning signal of what may happen if the necessary precautions are neglected. The diet and the clothing, as well as ventilation must receive every attention. Experienced travellers in the tropics recommend that all helmets should have red lining.

The difference between heat-stroke and sun-stroke is really one of degree only, though the latter is rather more serious in its effects. A person who has suffered from sunstroke once is very liable to be attacked again, and he should therefore avoid localities where the temperature rises to high degrees. (*See* " Sunstroke.")

Heat Spots **448**

Children are frequently troubled with rashes or eruptions on the skin which come and go, causing much itching and general inconvenience. Mothers and nurses call these rashes heat lumps or heat spots, though they have nothing to do with heat. They are generally the result of indigestion or of a rich diet, unless caused by parasitic irritation. A change of food, both in quantity and quality, will effect the desired improvement, if supported by attention to the bowels. The addition of boracic acid to the child's bath is advisable. Sulphur baths are also very useful in combating "heat spots," because in a large proportion of cases they destroy the insects or parasites which produce the rash. With the same object in view, sulphur ointment may also be given a trial.

Hectic Fever **449**

Apart from the hectic fever which accompanies wasting diseases, like consumption, a similar condition results from a chronic discharge of pus or matter, as, for instance, when a wound is not kept aseptically clean, and it is not properly drained. The patient sweats profusely and becomes perceptibly thinner, his temperature rises in the evening and goes down in the morning, he may suffer much from diarrhœa or other complications.

The treatment is that of the cause, and everything must be done to prevent absorbtion into the blood of the septic products of the wound. Tonics and hygienic measures will do the rest.

Heels, Tender **450**

Persons who have to stand much, often complain of pain and tenderness in the heels without there being any hardness of the skin or callosities to account for it. Rest with the legs in a horizontal position is, of course, the only rational treatment. Preventive measures consist in wearing soft cork socks inside the boots to relieve the pressure and also in strapping the painful heels with adhesive plaster.

Some cases of tender heels are explained by the presence of a bony projection or exostosis, which can be demonstrated by an X-ray photograph.

Heredity in Disease **451**

This is a big subject, and more than one volume could be written on it alone. I will therefore only make a few general remarks. Consumption, as mentioned under another heading, is as such no longer regarded as a hereditary disease. Heredity plays an important part in hæmophilia, cancer, diabetes, and gout, and to some extent also in rheumatic diseases.

That insanity is frequently shown to be inherited is well known. The same thing may be said with regard to alcoholism — which indeed many authorities regard as a form or symptom of insanity. The inheritance from alcoholic parents does not always appear in the form of alcoholism but sometimes in the shape of some nervous disease. Most nervous diseases — including epilepsy and hysteria—are more or less hereditary, but no definite rules can be laid down. The same remark applies to affections of the eye, including chiefly cataract and colour blindness.

Whilst congenital malformations or peculiarities are generally hereditary, those acquired later in life are not. A man or woman who has become blind through an accident, for instance, need not be afraid that his or her child will be born blind. Cases to the contrary are rare exceptions to the rule, or possibly mere coincidences.

Hernia (Rupture) 452—453

By hernia—or rupture—we understand the protusion of an organ from its natural cavity. In practice, the term refers to the protusion of the bowel from the abdomen. There are a number of expressions used in connection with the subject of hernia; some of the most frequent ones I will try to explain.

"Iguinal" hernia is the form which is commonest in men. It is situated in the groin, the bowel descending towards or into the scrotum. the bag which contains the testicles. It can be present either on one side only or on both, when it is called respectively single or double. "Femoral" hernia is the form which is commonest in women. It is situated towards the centre of the top of the thigh in front.

We call a "reducible" hernia one which can be reduced, that is pushed back into the abdominal cavity, and "irreducible," one which cannot be so pushed back. A hernia is "strangulated" when it is so gripped in the ring through which it has protruded, that the intestinal contents are arrested in their passage and the blood-circulation in the protruded part is stopped. This is the chief danger to which hernias are subject, as strangulation is soon followed by inflammation, gangrene, and general blood-poisoning of a fatal nature.

453. "Umbilical" hernia takes place through the navel, and "ventral" hernia through an opening in the wall of the abdomen. "Congenital" hernia is present at birth. "Acquired" hernia is generally the result of severe muscular strain.

The object of a "truss" is to retain in the abdomen the bowel which would otherwise protrude. The "radical cure" by operation is generally resorted to when strangulation is either threatening or present or if a truss cannot hold the bowel in the abdomen. It is demanded of those desirous to enter one of the national services.

The symptoms of hernia are a painless swelling which disappears entirely or partially on lying down, an impulse when coughing, which is felt by placing the hand against the swelling, a gurgling sound when the protrusion is pushed back into the abdomen and several others of a more technical kind which can be appreciated only by a doctor.

As already hinted, the treatment of hernia consists either in the application of a suitable truss or the performance of a radical operation. It must be distinctly understood that a permanent cure by the wearing of a truss is an

exceedingly rare event, the rule being: Once wear a truss, always wear a truss. In young children, however, this rule is subject to very many exceptions, a cure resulting from the wearing of a truss for about two years, or longer.

Hernia is to some extent hereditary, but straining and over-exertion are among its commonest causes.

Herpes 454

Herpes is a frequent affection of the skin which shows itself in the form of little blisters or "vesicles." These are often seen on the lips and cheeks, especially after feverish illnesses, or in connection with nasal catarrh through the irritation caused by the discharge. The application of a little zinc ointment or boracic acid solution is generally sufficient to effect a cure.

The herpes known as "herpes zoster," "zona" or "shingles" is a painful eruption on the chest which sometimes leaves scars behind. It is really a kind of neuralgia, and lasts a few days. In old people it may become chronic. The treatment consists in protecting the vesicles from being injured in any way, and in the application of zinc ointment or lead lotion. If the pain is very severe it may be necessary to give morphia or opium.

Very little is known of the causation of shingles, though it is supposed that atmospheric changes have something to do with it.

Hiccup 455

Hiccup or hiccough (Singultus) is a spasmodic closure of the entrance to the windpipe caused by a sudden contraction of the diaphragm—the muscular partition between the cavity of the chest and that of the abdomen. It is generally brought about by irritation of some sort, say an over-distended stomach full with food or drink, or the swallowing of some sharp or spiced substance. Whilst it is, as a rule, of no serious importance, it is occasionally a symptom of grave diseases, like meningitis or cancer. At other times it seems to be a sort of acute nervous attack, lasting for hours almost without intermission.

To arrest an attack of hiccup several remedies are recommended, none of which are often of any use. The most commonly employed are: an emetic to produce vomiting, protrusion of the tongue, an attempt to hold the breath whilst counting up to a hundred, the application of heat or blisters to the back of the neck, or of the electric current over the stomach, the inhalation of chloroform—not to be employed without medical control—and a 5 or 10-grain dose of potassium bromide. I have seen cases arrested by hypnotism or other methods of psycho-therapy.

Recently there has been a revival of the old-fashioned method of cutting short an attack of hiccup by snuffing up into the nose a good pinchful of tobacco snuff and thus inducing violent sneezing. Hiccup may also be treated by eating quickly ice cream or cracked ice.

Hip-Disease 456

Disease of the hip-joint is generally of a tuberculous nature, and though it is seen as a rule in children it is occasionally present in adults as well. It is often mistaken for rheumatism, with the result that proper treatment comes too late. Being a very serious disease it should receive medical attention from the appearance of the first symptoms. These are pain, which is often referred to the knee, limping, more or less bending of

the limb and later on, wasting and fixation of the muscles. The treatment is by rest and splints in the earlier stages, and by operation afterwards.

The hip is subject to various forms of dislocation, some of which are congenital and largely the result of hereditary influence or insufficient development. Others follow inflammatory processes in the hip-joint, and others again occur in consequence of injury or accident. Congenital dislocation of the hip is seen more frequently in female children and only begins to be noticeable when the child attempts to walk. The other forms of dislocation are generally amenable to the usual treatment. (*See under* "Joints, Diseases of.")

In old people there frequently occurs a form of hip disease known as senile coxitis, which is really a sort of rheumatoid arthritis, the symptoms being pain, stiffness, and wasting, but without the signs of inflammation.

The term coxalgia, which means neuralgia of the hip, is often used vaguely to denote hip disease of which the cause is more or less obscure.

Hodgkin's Disease (Lymphadenoma) 457

This is a serious disease of the blood, the principal symptom of which consists of an enlargement of the lymphatic glands all over the body, followed at a later stage by rapid swelling of the spleen and liver. The real causation of the disease is not perfectly understood. Whilst some hold the opinion that it is a form of tuberculosis, others regard it as a separate infectious illness. As a rule there is no fever present, and this is one of the distinguishing features. Another is that the glands may become swollen to an extent unknown in other diseases. Whilst it is sometimes possible to arrest further progress by treatment with arsenic in a suitable form or dosage, the outlook is as a rule unfavourable, a fatal termination taking place in about three years.

Some cases have recently been treated with the X-rays, and others with salvarsan, or various vaccines, but the results have hardly come up to expectation.

Hodgkin's disease is also known by the name of Pseudo leukæmia.

Home Sickness (Nostalgia) 458

The notion has arisen to regard home-sickness as a real illness—mental and physical—and not only as a mere temporary depression of spirits. In the case of soldiers home sickness frequently induces them to desert, and in conscript countries they often commit self-mutilation with a view to being discharged and sent back to their relatives. Loss of appetite, sleeplessness, headaches, an unaccountable feeling of sadness, etc., are the usual symptoms. It is obvious that the treatment to be adopted must be directed to cheering the mind rather than the body.

Housemaid's Knee 459

This is a very frequent affection in girls and women who have a lot of kneeling to do. There is a little pad—technically called a "bursa"—in front of the knee-cap which serves as a kind of protective cushion to the joint, but which is apt by irritation to become inflamed, swollen, and painful. This swelling and inflammation constitute "housemaid's knee." Similar swellings occur in other situations, for instance, at the elbow, on the buttock, etc. The treatment consists of rest, a suitable bandage, and painting the

swelling with tincture of iodine or iodex ointment. Complications are apt to arise. Operative treatment is occasionally necessary to cure obstinate or constantly recurring cases.

Hydrocele **460**

Hydrocele is an accumulation of fluid in a sort of sac inside the scrotum —or testicular bag—which may arise from a variety of causes. It must not be mistaken for hernia or rupture. The usual treatment is to "tap" the swelling and liberate the fluid. This has to be done again and again, because the sac has a tendency to refill, and as it causes great inconvenience many sufferers prefer to undergo the radical operation, which consists in partial or complete removal of the sac in which the fluid forms. There is no justification for the belief that the radical operation for hydrocele causes impotence or sterility. A less radical method consists of the injection into the sac after tapping of some obliterating fluid, such as tincture of iodine or dilute carbolic acid lotion.

Hydrocele occurs in children as well as in adults. In the former, however, a cure is frequently effected by the application of a truss only, especially in congenital cases. Hydrocele differs from hernia in being painless and irreducible. Nor does it go down when the patient lies flat on his back as does a hernia. An "encysted hydrocele" may be mistaken for a swollen gland in the groin.

Hydrocephalus **461**

Hydrocephalus, or water on the brain, is a disease seen mostly in children. It is either congenital or acquired during the first four or five years through an injury or unhygienic conditions, and consists of an accumulation of fluid in the brain causing it to become distended and giving the head a markedly larger appearance than normally. The symptoms are irritability and convulsions leading eventually to paralysis and an early death. Sometimes the result is life-long idiocy. All treatment is practically useless, though temporary relief may be effected by puncture and removal of some of the fluid.

Hydrophobia **462**

This is rather an unfortunate name for the well-known disease which results from the bite of an animal suffering from "rabies"—generally a dog. Hydrophobia means fear of water, but it is not that which causes the symptoms; it is the difficulty in swallowing liquids which produces attacks of convulsions. The disease is one of the nervous system which seems to be particularly susceptible to the influence of the poison inoculated by the bite. The symptoms may not appear for some considerable time (six weeks to three months, or possibly longer), hence the importance of caution after being bitten by a suspected animal.

The first danger signals are headache and sleeplessness with more or less marked delusions. The spasms of the throat and jaws appear at a later stage, when the irritability and sensitiveness are excessive. Death is preceded by unconsciousness.

If the patient is seen immediately after the accident it is usual to cauterise the wound (*see* "Cauterisation"), but most doctors prefer to adopt immediately the so-called "Pasteur treatment"—a kind of vaccination which consists of an inoculation with a modified poison derived

from the one which produces rabies in animals.

The wound from a bite should in every case be disinfected and bandaged as soon as possible.

It is advisable that the animal inflicting the bite should not be destroyed immediately when supected of hydrophobia, but handed over to the proper authorities so that it may be examined. If found not to be affected with hydrophobia, the knowledge of this fact will ease the mind of the person bitten and prevent him from developing an unfounded fear or becoming hysterical. This happens rather frequently and is the cause of much unnecessary anxiety. The condition is known as pseudo-hydrophobia.

Hydrotherapeutics (Hydropathy) 463

In these terms are included the various methods of treating disease by the application of water, internally or externally. In addition to the treatment by different kinds of baths, already dealt with in another section, hydropathy embraces sponging, the wet pack without or with friction, douching, needle and shower-baths, flowing or stationary sitz-baths, and numerous other procedures. How far the beneficial results obtained at hydropathic establishments are due to the water treatment and how much to the regulated mode of life and more rational diet, it is impossible to say. Probably each of these items is a contributory factor. The question is also now much considered to what an extent the radio-active properties of the waters in the different spas are responsible for the successes which the latter claim, and it will take some time before a definite answer to it will be available.

Hygiene 464

The observance of the laws of common sense by which life and health are maintained constitutes the essence of what is known as hygiene. I cannot possibly attempt to deal with the subject here more than in brief and general terms. Each age and each period of life has its hygienic requirements, but in none is it of greater importance to comply with them than in the case of young children. The observance of such simple laws as a plentiful supply of fresh air and sunshine, sufficient sleep, rational method of dressing, proper feeding, scrupulous cleanliness, etc., will secure for them a substantial foundation in the years to follow, so that they may grow up healthy and strong. The present-day tendency among municipalities and public bodies to do everything possible for the welfare of the rising generations cannot be commended too highly. Rates and taxes paid with that end in view are the finest investment for the nation as a whole, and no one should begrudge his share of the burden.

The hygienic motto for infancy and childhood should be "Sustain" for the mature individual, "Sustain and Abstain," and for old age, "Sustain," once more! Nothing is so important to old people as warmth. Cold kills the majority of them.

Hypnotism 465—467

Hypnotism is defined as a state of mental attitude in which the will-power is suspended whilst it is influenced by suggestions coming from others to an extent not accepted at other times. This hypnotic condition is obtained in various ways, such as monotonous gazing upon some object, physical manipulations intended to

impress the person to be hypnotised, suggestive phrases or a determined manner of speech, and so on. Once the state of hypnotism is reached, the individual is amenable to actions and thoughts dictated or suggested to him, and in this way he can be cured of diseases in which the mind plays an important part. It is perfectly obvious that a fracture or dislocation cannot be treated successfully by hypnotic suggestion, whereas functional affections of the nervous system which rest mainly on deficient will-power can. This explains the limitations of this method of treatment and also the cause of its successes.

466. Whilst there is no doubt that in the hands of a sincere and skilful medical practitioner a number of sufferers who derive no benefit from other methods of treatment can be cured, if not permanently, at least for longer or shorter periods by the employment of hypnotism, one cannot shut one's eyes to the fact that many unscrupulous persons have recourse to it without possessing the necessary skill or knowledge of diseases. That treatment by such individuals is not only likely to fail but to cause serious mischief stands to reason and no further words of warning are necessary. There are quite a number of doctors now who practise hypnotism with considerable success, though some of them are perhaps a trifle over-enthusiastic. This, however, is if anything to the benefit of the patient, for if a doctor is himself a believer in a method of treatment, he is much more likely to be successful with it.

On the other hand, it must be admitted that in many cases hypnotism fails to do good. Indeed, it often happens that one cannot even induce the hypnotic state, for reasons which are not understood, the usual explanation being that some individuals are susceptible to hypnotism, whilst others are not.

467. The following are some of the diseases in which treatment by hypnotism is most successful: Hysteria and its various modifications or single symptoms, neurasthenia, mild forms of insanity, dipsomania, and chronic alcoholism, morphinomania and other drug habits, viciousness in children including bed-wetting if not the result of organic disease, and several others. Recently hypnotism has been employed as an anæsthetic during operations with much success.

As to the so-called dangers of hypnotism we have it on the authority of most eminent scientists and doctors that there are none. Where evil consequences result the cause lies in the inexperience of the practitioner or in different complications more or less unavoidable.

Speaking for myself I can say that although I have treated a large number of patients by hypnotic suggestion I do not remember a single case in which I had unpleasant side-issues, though I do not pretend that I have actually cured every one of the patients.

The opinion is also gaining ground that there is no truth in the belief that hypnotism may be utilised for the purpose of inducing anyone to commit a crime in ignorance. This appears to be possible only in the case of individuals who are otherwise criminally inclined. Nevertheless such a possibility is an additional reason for refusing to allow oneself to be hypnotised by a person whom one cannot trust fully. One cannot be hypnotised against one's will.

467a. During the last few years a new method of medical treatment has

arisen under the name of "Psycho-therapy" for employment in diseases of a functional nature or even in organic diseases when the mental symptoms are the more prominent. Its principal constituent is suggestion applied with or without the aid of actual hypnotism, but there are variants of it spoken of as auto-suggestion, persuasion, etc.

Psycho-therapy is especially adapted for the treatment of hysteria and neurasthenia in their different forms, all of which are now included under the name of psycho-neuroses or functional disturbances of the nervous system which controls the mind.

"Psycho-analysis," of which we hear so much now, is a form of psycho-therapy, which aims at elucidating the original cause of the neurosis. Stated by Freud and others to be always something connected with sex, it is frequently unknown to the patient himself, having arisen perhaps at a very early age and been completely forgotten. Psycho-analysis brings it back to the recollection and assists the consciousness to fight it by the exercise of common sense. The means employed by the psycho-analyst are hypnotism, the study of the patient's dreams, various so-called "association-tests," etc.

Hypochondriasis **468**

This is really a disordered state of the mind rather than an actual physical illness, and as a matter of fact a number of hypochondriacs develop insanity sooner or later. The hypochondriac imagines that he suffers from all sorts of ailments or serious diseases, or else he exaggerates those from which he does suffer and which are as a rule of slight significance. He is constantly studying his health and his symptoms and can hardly devote his mind to anything else. The tongue particularly is a matter of concern to him, and he is always examining it through a looking-glass. Yet his appetite is good, he sleeps well, looks well, and the bodily functions follow their normal course, except perhaps that there may be more or less constipation. Hpyochondriasis is allied to neurasthenia, and it is not easy to differentiate between them.

The treatment is of a moral nature rather than by drugs and medicines. The will-power and common-sense must be encouraged and supported. A regulated mode of life with suitable exercise and congenial recreation must be adopted. To those who can afford it, travelling may be recommended as the best diversion from their morbid thoughts.

Hysteria **469—471**

There is perhaps no other term in medicine which is so misunderstood as the word "hysteria." Nine people out of ten look upon hysteria either as a product of the imagination or even as fraudulent malingering, and very little sympathy is as a rule shown to anyone who is known to be hysterical.

And yet hysteria is a serious disease of the nervous system which is completely out of the control of the patient. In fact, she—for hysteria affects chiefly the female sex, though it is seen occasionally in men also—often does her level best to conquer it—but without success, for she cannot muster the necessary will-power to check the nervous manifestations. It is true that doctors call hysteria a functional disturbance, but that is only because the slight organic changes—which probably accompany the symptoms—are as yet undiscoverable by the means at our disposal. The cause is generally a bad

home education supplemented by hereditary influences.

470. The symptoms of hysteria are many and varied. Some, like the hysterical fit proper, are exceedingly alarming, and others almost insignificant. They include numbness, pain, violent outbursts of temper, paralysis, spasms, convulsions, loss of consciousness, the arrest of natural functions, and a number of others.

It takes sometimes all the skill of a most experienced physician to decide whether a case is one of hysteria or of some grave organic disease.

Still, there are a few signs which are characteristic of hysteria. One is the so-called "globus hystericus," a sensation as if a ball were rising in the throat causing something like suffocation. Another is the "clavus hystericus," an acute pain on the top of the head resembling a nail being driven into it. Then there are the unaccounted-for fits of crying or laughter, variations in the appetite from refusal to touch food to an insatiable craving for it (bulimia), an undue sensitiveness against light or noise, loss of sensation in a limb or on the whole of one side of the body—this being called technically "hysterical hemi-anæsthesia," loss of the voice—"hysterical aphonia"—paralysis of more or less extent (which differs from ordinary or real paralysis in not showing as a rule any signs of wasting), and convulsions with loss of consciousness which are generally distinguishable from an epileptic fit by the fact that the patient hardly ever hurts herself or hardly ever bites her tongue.

There is also in a hysterical fit more stiffness and rigidity than in epilepsy. If this state continues for some time, it leads to the condition described under Catalepsy. Somnambulism is another of the manifestations of hysteria. (*See under* "Sleep, Disorders of.")

471. From what has been said, it follows that the treatment of hysteria must be one directed chiefly towards strengthening the will-power of the patient. Often a sudden powerful emotion succeeds where years of ordinary medical aid have failed to produce the slightest effect. In this way one explains the miraculous-looking cures achieved by Christian Science and wonder-working wells like those of Lourdes. It is undeniable that the mind possesses an enormous influence over the body, and that faith can be a powerful factor in curing disease—especially diseases of a functional nature like hysteria.

As already mentioned in other sections, electricity, hydropathy and massage form useful items in the treatment of hysteria. Psychotherapy, which includes hypnotism, suggestion, and similar methods of treatment (*see* section 467a), succeeds in a very large number of cases in bringing about at least temporary improvement. In others, the bromides, the valerianates, or various tonics have some beneficial effect and are worth a trial.

As to the treatment of the various symptoms, it will be found described under the respective headings—for which, *see index*.

Ichthyosis (Fish-skin Disease) 472

A disease of the skin characterised by dryness and scaliness of the epidermis resembling the scales of a fish and accompanied by more or less thickening of the whole skin. The condition is as a rule congenital, in exceptional cases it develops later in life. Generally the whole body is affected

with the exception of the face, the palms of the hands and the soles of the feet. The disease is practically incurable, but it may be relieved to some extent by washing and rubbing off the scales with soap and water and keeping the skin smooth with the aid of sulphur baths or sulphur ointment prepared with lanolin. A diet rich in fats is also helpful. It has been suggested lately to give internally thyroid gland extract, and this might be tried in suitable cases.

Ichthyosis is also known by the name of xeroderma. The form in which the skin is covered more or less with wart-like growths is spoken of as ichthyosis hystrix.

Icterus Neo-Natorum **473**

This is the technical term by which we know the slight jaundice which appears sometimes in newly-born children. The causation of it is somewhat obscure, but it is believed that it arises from the absorption of bile contained in the first contents of the bowels or from decomposition of red blood corpuscles. It takes as a rule from eight to ten days for the jaundice to disappear entirely without leaving any ill-results behind. Treatment is not necessary. These remarks do not, of course, apply to the very severe forms of jaundice in children due to some congenital malformation in the abdominal organs and which soon end fatally.

Idiosyncrasy **474**

By this expression we understand an individual peculiarity which renders the person concerned liable to react differently than other persons to drugs or other influences. For instance, some persons faint at the sight of blood or some other disagreeable object. There is a case on record of a man who fainted whenever he was in the presence of beetroot. Others exhibit signs of distress through the exhalations of certain animals, such as a cat, or through the odour from roses or apples.

Eggs, honey, sugar, fish, certain fruits, and many other articles of diet have their victims in this respect, producing in some people symptoms of poisoning, in others attacks of asthma, or nervous shock.

Minute doses of a drug which the majority of people can take without any trouble cause in a few alarming symptoms and even death. This applies chiefly to opium and belladonna. Some persons are particularly susceptible to the action of chloroform, and many accidents under anæsthesia can be ascribed to nothing else but idiosyncrasy. This list might be extended indefinitely, but the illustrations given are sufficient to show the extent to which it could go. It is necessary, however, to add that many persons think they had idiosyncrasies in a certain direction, but when put to the test they find they were mistaken.

Impetigo **475**

A contagious eruption of the skin, chiefly on or near the hands, face and scalp, and usually caused by insects and want of cleanliness. It consists of little vesicles full of pus which may give rise to itching and scratching, various lesions resulting from the latter. The glands in the neighbourhood are usually swollen. The best treatment is by the application of diluted white precipitate ointment, but the crusts should first be removed with the help of soap and water.

There is a rare form of impetigo in which the contents of the vesicles tend

to become greenish yellow, the vesicles themselves forming circular groups. This is called herpetiform impetigo. It is seen occasionally in pregnant women, and is as a rule fatal.

Idiocy and Imbecility **476**

These two terms are used synonymously, though in reality they denote degrees of severity of the same abnormal mental condition in children, imbecility conveying a lesser extent of backwardness than idiocy. The want of intelligence is generally due to an imperfect or arrested development of the brain, and the symptoms vary from mere "silliness" to the most pronounced mental incapacity. Imbecile children as a rule do not live long, and though their defectiveness is considered incurable, many of them when placed under proper conditions attain a certain amount of improvement. Imbecility is generally accompanied by physical ill-development, and sometimes when the latter undergoes a turn for the better, the former may also improve to some extent. Imbecile children are best brought up and educated along with others like themselves in special schools.

Indigestion **477—479**

Acute indigestion—or acute dyspepsia—is a disturbance in the function of the stomach which results from the consumption of food, either excessive in quantity, or irritating in quality. The symptoms are a feeling of distension and discomfort, or actual pain, immediately or some little time after a meal, a fluttering in the region of the heart, a sinking feeling of faintness and an inclination to vomiting. Sometimes there is also unusual activity of the bowels. The vomiting generally brings relief, and where it does not come on spontaneously, it can be induced by the administration of an emetic—such as warm mustard and water, warm salt-water, or half a teaspoonful of zinc sulphate dissolved in warm water. In milder cases, abstention from food for several hours and the sucking of a little ice suffice to re-establish normal digestion.

Chronic indigestion, in which the symptoms described above appear after every or nearly every meal, may be the result of some constitutional illness like anæmia or consumption, or organic disease of the stomach, such as ulcer or cancer, or—which is the case in the vast majority of sufferers—of decayed teeth and errors in the matter of diet. Either the food is consumed in such large quantities that the stomach is incapable of dealing with it, or else it is improperly and insufficiently masticated and hastily swallowed, or it is badly cooked too hot, or of an indigestible nature. It is also worth mentioning that scanty or unsuitable clothing is a frequent cause of chronic indigestion.

478. There are several kinds of indigestion, and sometimes one of the symptoms is so marked as to constitute the whole complaint of the patient. This is especially the case with regard to heartburning, flatulence, and acidity. Water-brash is another form of indigestion in which a quantity of sour liquid is brought up into the mouth, while there may be pain in the region of the stomach.

The form known as "nervous dyspepsia" is very frequent in people of a nervous temperament, and is, in most cases, one of the manifestations of an existing neurasthenia. The chief symptoms are pain, vomiting,

and flatulence, while the appetite is, as a rule, good.

479. The treatment of dyspepsia depends upon the cause, and one should always try to discover the latter. The teeth should be attended to in the first instance, and artificial ones provided where necessary. The less digestible articles of food should be abstained from as much as possible. They include pork, veal, game, shellfish, pastry, carrots, turnips and parsnips. Where there is much flatulence and acid fermentation, the best diet is one consisting chiefly of milk and fish. Alcohol, tea, coffee, and tobacco-smoking are best avoided. In some cases a half an hour's rest after meals often brings complete relief.

Of medicines, bicarbonate of soda, bismuth, and nux vomica, as, for instance, in the following mixtures, are in most cases beneficial.

Pepsin, 8gr., dilute nitro-hydrochloric acid 20m., tincture of nux vomica 20m., compound infusion of gentian to 4oz.; one tablespoonful three times a day before food.

Carbonate of bismuth 40gr., bicarbonate of soda 80gr., compound tragacanth powder and compound infusion of gentian to 8oz.; one tablespoonful every four hours.

The treatment of flatulent dyspepsia will be found described under the heading "Flatulence."

In all circumstances the golden rule in indigestion is to eat little, and frequent, rather than big meals, and to drink small quantities of liquids, chiefly between meals.

(*See under* "Acidity of Stomach," "Gastritis," etc.)

Infantilism **480**

An arrest of development both mental and physical, is observed sometimes in children as either the result of, or in association with, some organic affection more or less apparent. To this condition the name of infantilism has been given. The subject has been studied recently and it has been found that there are several forms of infantilism. Cretinism is one of them, and as already mentioned under that heading it is supposed to arise from defective action of the thyroid gland. Then there is the form of infantilism coincident with an insufficient development of the genital organs. Disease of a small gland situated at the base of the brain, named the pituitary body, appears to be responsible for some cases of infantilism. The same may be said with regard to the supra-renal glands situated over the kidneys, and also various other organs, including the intestines. The treatment of infantilism is by means of extracts from various glands, principally thyroid, pituitary, and ovarian, and the results of the same are on the whole fairly satisfactory. (*See under* "Thyroid Gland, Diseases of.") But hygienic measures, such as rest in bed, or on a couch in the open air, and a generous diet are a most necessary supplement. (*See also under* "Backwardness" and "Cretinism.")

Infection **481**

The communication of disease from one person to another without actual contact between them, through the intermediary of bacteria or microbes. How the communication takes place is not always clear; sometimes, as in the case of smallpox, the infection appears to take place from a distance and consequently through the air, but as a rule it may be assumed that it occurs indirectly by contamination of food or drinking water, and only in this way

can one explain the outbreak of epidemics. The action attributed to flies in this connection is by no means imaginary, and one cannot encourage too much measures calculated to annihilate as many of them as possible.

Infection may spread from one part of the body of an individual to another, as for instance in boils, and this is spoken of as auto-infection or reinfection. (*See also under* "Contagion.")

Inflammation **482**

The scientific explanation of inflammation is a series of changes in a part of the body or in some particular organ produced by disease or injury of either a bacterial, mechanical, physical, or chemical nature. In a sense, inflammation is a curative attempt on the part of nature to eliminate from the organism irritating or injurious substances. These are brought to the surface by an increase in the local blood circulation and from there they find their way outwards. The four classical symptoms of inflammation are pain, swelling, redness, and heat, and to them should be added the more distant or constitutional disturbances, included under the names feverishness or fever.

Inflammation terminates either in "resolution," when the process disappears without leaving any marks behind, or in suppuration (formation of abscess) and ulceration. The total death of a part which may result in consequence of inflammation is spoken of as necrosis. An acute inflammation may also pass into a chronic one.

The treatment of inflammation in the early stages is by cold applications or blood-letting. Later, heat is of greater use especially if an abscess tends to form. At the same time the cause must be sought and removed if possible. Abscesses, ulcers, and other consequences must be treated as described elsewhere.

Influenza **483**

For practical purposes it may be said that Influenza is an epidemic form of catarrhal inflammation of the respiratory organs, from the nose to the lungs, differing from an ordinary catarrh merely in the severity of the symptoms. These are a state of feverishness with muscular pain and prostration, sneezing, a discharge from the nose, watery eye, headache, coughing, and a number of others. In some cases the nervous symptoms are more pronounced than the catarrhal, and in others the abdominal organs appear to be mostly affected. (*See* "Catarrh.")

Influenza is reckoned among the infectious diseases, as it is conveyed from person to person by a special microbe, the bacillus influenzae. For this reason it is seldom present otherwise than in epidemics, the so-called attacks of influenza of which solitary individuals complain now and then being as a rule nothing more than severe colds in the head. The most distinguishing signs between the two affections are the suddenness with which influenza sets in, the short duration of the feverish stage, and the prolonged subsequent feeling of lassitude and exhaustion. In quite a number of cases the sufferers do not realise until weeks and perhaps months have passed that they have had influenza, and that this is the reason why they feel "run down" for so long a time.

Influenza as such is not a dangerous illness, but it is dangerous on account of possible complications, particularly pneumonia, pleurisy, chronic bronchitis, Bright's disease, and, in rare cases, insanity.

Hence the necessity of taking influenza seriously. The patient should get into bed on the appearance of the first symptoms, when it is known that an epidemic is prevalent. He should not get up until the temperature is down to normal. The best remedy is salicylate of soda in 10 or 15-grain doses every four or six hours. As this does not suit all people—in some persons it causes singing in the ears and other disagreeable consequences—other remedies available are aspirin, phenacetin, 5 grains of either every three or four hours, and quinine in one or two-grain doses every hour or two. A useful additional treatment is the application to the nasal mucous membrane of menthol (one or two grains to the ounce of liquid vaseline). In the stage of convalescence, tonics such as vitafer, or quinine and iron may be taken with benefit.

Ingrowing Toe-Nail **484**

This frequent and troublesome complaint which usually affects the great toe arises partly through pressure by tight boots and partly through cutting the nail too close at the corners. The flesh at the sides of and round the nail grows over it with the result that it ulcerates and causes much pain. If allowed to go on unchecked, the inflammation may involve the whole of the foot. The treatment of the condition consists in inserting a shred of clean lint dipped in solution of boracic acid between the nail and the fleshy part of the toe so as to allow the former to grow over the latter. If there is much pain and tenderness, the nail may be softened by painting it with a ten or twenty per cent. solution of caustic soda and the toe should afterwards be wrapped up in cotton wool and bandaged.

In severe cases, an operation with a view to removing the whole of the nail or a portion of it frequently becomes necessary. This is generally done under an anæsthetic, as the pain is very great.

Those who have an inclination to ingrowing nails should be particular about their boots which should be broad and not narrow at the toe-end. In cutting their toe-nails, they must also be careful to see that they are cut square, and if anything, more towards the centre than the sides.

Inhalations **485**

Inhalation of steam with or without the addition of medicaments is a useful method of treatment in diseases of the respiratory passages—from the nose to the lungs. In the absence of a special apparatus an ordinary kettle—protected against causing scalding—or a jug with a wide mouth may be employed; in the case of the latter, a towel should be arranged so as to prevent the escape of the vapour into the air. A favourite remedy for inhalation purposes is Friar's balsam—or compound tincture of benzoin—a teaspoonful added to a pint of hot water.

A good antiseptic inhalation—or spray—in cases of bad breath, due to lung disease or other causes, is glycerine of carbolic acid in the proportion of two or three teaspoonfuls to a pint of boiling water.

For similar purposes, one may also use an inhalation of formalin—one or two per cent. strong, or of creosote, a teaspoonful to a pint of water.

Injections **486**

There are various kinds of injections. Those known as hypodermic are made by means of a needle-like

syringe into the skin for the purpose of introducing into the system powerful drugs like morphia or strychnine in order to cause them to act more quickly than if taken by the mouth, or to prevent unpleasant complications likely to happen if they are taken by the latter method.

Injections of medicated fluid into the ears or nose should never be made with cold water, but always warm or tepid.

Methods of intravenous and intramuscular injections are now practised to a large extent. In the former, the drug is introduced into the system through the blood circulation direct, in the latter by injection into muscles, chiefly of the buttocks. Intra-spinal injections are made by lumbar puncture into the spinal cord.

Inquest **487**

Though not directly within the scope of this work, a few words on the subject of coroner's inquests will be of use to those who have suffered a sudden bereavement and when no doctor has seen the dead person previous to his or her death. An inquest must be held if there is reasonable ground to suspect that the deceased died a violent or unnatural death, or died suddenly from some unknown cause, or if the deceased died in prison or under such circumstances as to require an inquest, for instance, in a lunatic asylum, an inebriates' retreat, or a baby farm.

In a case of sudden death of a person, whom no doctor has seen whilst alive within a reasonable time previously and for which an ordinary certificate of death can therefore not be obtained, the coroner generally makes private inquiries, and if he is satisfied that death was due to natural causes, he may issue his certificate without holding an inquest. The first step to be taken by the relatives or friends of the dead person is to communicate with the coroner direct or through the police.

Persons suffering from a chronic disease which may end fatally at any moment should be seen by a doctor at frequent intervals so as to save their friends the trouble and annoyance of a possible inquest.

Insanity **488—489**

One can hardly say much in a book for laymen on insanity and mental diseases. That the number of the insane is on the increase is unfortunately evident, but whether this is merely the result of more careful enumeration, diagnosis, and isolation, or whether the increase is a real one, opinions seem to differ. The harder struggle for existence in these days of keen competition and "too old at forty" cannot be without practical importance.

The symptoms of insanity vary from slight signs of eccentricity to the most violent outbursts, and it requires sometimes the utmost tact and knowledge to decide whether a person is insane. As to treatment there can be no question that it should never be undertaken at home or otherwise than in a suitable institution, for even if a case is apparently of a mild character one can never tell when it may take a turn for the worse.

For the detention of a supposed lunatic two certificates from two independent doctors are required, except in cases of urgency, where one is sufficient, but only for seven days.

489. The four principal types of insanity are included in the designations melancholia, mania, delusional

insanity and dementia, but the classification of insanity is rather a complex matter. Sometimes it is based on the causation of the malady, as, for instance, when we speak of alcoholic insanity, imitative insanity, insanity of pregnancy, insanity of childbirth, etc. Or it relates to the period of life, as when we speak of the insanity of puberty, climacteric insanity, senile dementia, etc. The form of the insanity also determines its name. Thus, we speak of emotional insanity, hysterical insanity, impulsive insanity, moral insanity, religious insanity, and many others.

Then there are the forms of insanity or mental derangement which have their own special names, for instance, idiocy, imbecility, general paralysis of the insane, feeble-mindedness, etc., many of which will be found discussed under their own headings, or mentioned in the Index.

Reverting to the most frequent causes of insanity, it is usual to place hereditary influences in the front rank as a so-called predisposing cause. This does not necessarily mean that there must be an actual history of insanity in the family. The hereditary influence may proceed from a parent or grandparent who was suffering from some nervous disease of a more or less pronounced character.

Of the exciting causes of insanity, that is those which are directly responsible for the mental breakdown, the one which easily heads the list is the excessive indulgence in intoxicating drink. The others, besides those already mentioned above, include lead-poisoning, addiction to drugs such as morphia and cocaine, continuous mental excitement or worry, sunstroke, injuries to the head, etc. It should also be mentioned that mental disturbances occur frequently in connection with a number of physical diseases both of the brain and other organs.

Insomnia **490—492**

Insomnia or sleeplessness is very rarely a disease in itself, but commonly the result or accompaniment of some other disease, especially one in which the nervous system is affected.

Frequently, too, insomnia is the result of worry, grief, or excitement or of some apparently trivial cause such as a hard bed, noise, or the presence of insects. A late heavy meal often accounts for a sleepless night, and so does prolonged study of an absorbing character. Persons following an occupation involving eyestrain or monotonous mental over-exertion are very much apt to suffer from insomnia.

Then, again, many people complain of insomnia without reason. Elderly people particularly belong to this class, forgetting that as a person gets older he or she requires less and less sleep. The insomnia of delirium tremens and of other mental disturbances is well-known, and it is equally known that indulgence in alcohol, tobacco-smoking or snuff-taking keeps up in many people a chronic insomnia. Drinking of strong tea or coffee in the evening is also a common cause of sleeplessness. In many persons constipation has a similar effect.

Insomnia should therefore never be treated without an attempt to discover and remove the cause. Only when this is quite impossible should sleeping draughts or powders be employed.

In milder cases it is sufficient to take a dose of potassium bromide—say five or ten grains—an hour or so before going to bed. More powerful hypnotics, like opium, morphia, or chloral, are best taken by the advice of a doctor.

491. Recently several new hypnotics have come into frequent use. Of these sulphonal, trional, and veronal in doses of about ten to fifteen grains are the best known. With due caution they are fairly safe, though occasionally symptoms of poisoning occur after their employment, of which profound collapse and unconsciousness are the most prominent. Under such circumstances an emetic should be administered immediately — say warm salt water or warm water and mustard— and a doctor sent for. Death may, of course, result from a large overdose.

The new hypnotic known by the name of adalin is becoming a favourite remedy owing to its freedom from unpleasant accidents, and may be taken in doses of five to ten grains, followed by a hot drink of milk, weak tea or water, about half-an-hour before bedtime.

Before having recourse to drugs one should try, on retiring for the night, such simple remedies as a warm bath or foot-bath, a moist abdominal binder, a warm drink of milk or water with, in the case of elderly people, a teaspoonful or two of whisky added to it, a walk in the open air, half-an-hour's reading of some unexciting book or paper, etc. Many persons find in the use of hop-pillows an excellent way of courting sleep. Others conquer insomnia by lying awake with their eyes open and repeating mechanically words and phrases or counting from one to a hundred over and over again. The monotonous tick-tack of a watch or clock often has the same effect.

492. Persons who work all day in a close office or room will in most cases successfully combat any insomnia they may suffer from by sleeping with the bedroom door and window open. I may say that I have repeatedly in the course of my practice seen good results from this simple recommendation. Where the outside noise is a reason for keeping the window closed I am in the habit of suggesting that the person concerned should place in his ears what are known as india-rubber sound-deadeners or even plugs of ordinary cotton wool.

It will, perhaps, interest those of my readers who are more scientifically inclined if I say that physiologically sleep is explained as a temporary anæmia of the brain. Consequently, if the reverse takes place, that is, if the brain is congested with blood instead of being comparatively emptied of it, the result is an inability to go to sleep. That is why all conditions tending to produce cerebral hyperæmia are of a necessity accompanied by, or the causes of, insomnia.

Intemperance **493**

When speaking of intemperance one generally associates it with excessive consumption of alcoholic drink, but the term applies with equal force to over-indulgence in any kind of natural function. Intemperance in eating leads to dyspepsia, gout, obesity, or other diseases. It is obvious that intemperance being a product of misapplied or deficient will-power is not curable by drugs and medicines except in addition to moral treatment. For this reason it can be combated successfully only in suitable institutions or under suitable supervision. For alcoholic intemperance especially, *see under* "Alcoholism."

Intestines, Anatomy of **494**

The intestines or bowels are subdivided as follows: The portion beginning at the pyloric end of the stomach and ending at the cæcum

and near the appendix is called the small intestine. It is about 20 feet long and lies in the abdomen in the shape of a zig-zag tube. The portion from the cæcum to the anus is called the large intestine and is about 5 feet long.

The small intestine consists of the duodenum (about 12 inches long), jejunum (about 7 feet long) and ileum (about 12 feet long) which are continuations of one another. The duodenum receives the food from the stomach, from there it is passed after undergoing further digestion into the jejunum and afterwards into the ileum. Thence it enters through the ileocœcal valve into the divisions of the large intestine, passing first through the sac-like pouch called the cæcum into the ascending colon, which goes upwards along the right side as far as the liver. Then it traverses the transverse colon lying horizontally across the abdominal cavity, enters and passes as fœcal matter through the descending colon on the left side into the rectum of which the anus is the terminating orifice. The latter is kept closed by a muscular ring called the sphincter which dilates and opens when evacuation is about to take place.

Intestines, Diseases of **495**

These will be found discussed under the various headings, for instance, appendicitis, colitis, constipation, diarrhœa, enteric fever, enteritis, etc. Here I will only mention the condition known as intestinal obstruction, caused by such occurrences as a twist in the bowel (volvulus), an impacted gall stone, a tumour, a hardened fœcal mass, and so on. The symptoms are, as a rule, sudden pain of an excruciating character, vomiting, constipation, distension of the abdomen, and more or less general collapse. I will not waste any words on the question of treatment. Medical aid must be summoned immediately, as an operation is the only course possible almost in every case. To relieve the acute pain, it is permissible to give opium in fairly large doses—say half a teaspoonful of laudanum—and to apply hot fomentations until the doctor arrives. Give no opening medicine.

There is also a chronic form of intestinal obstruction in which the symptoms, though the same, are, however, much less severe. If they become as marked as in the acute form and relief is not obtained from a restriction in the diet and purgation, a doctor must be sent for with a view to an operation.

Iodism **496**

A combination of symptoms resulting from the prolonged use, internal or external, of drugs containing iodine—for instance, potassium iodide, tincture or ointment of iodine, etc. The commonest of these symptoms are nasal irritation with discharge of mucus from the nostrils, headache, a metallic taste in the mouth, increased salivation, and an eruption of the skin. The treatment consists, of course, in discontinuation of the drug in question. Some recent iodine preparations like sajodin or iodipin are less likely to give rise to iodism and are therefore much prescribed now in place of the older drugs.

Itch (Scabies) **497**

Itch—or scabies—is a parasitic disease of the skin, the parasite (acarus scabiei) being easily conveyed

from individual to individual through the medium of clothes or bed-clothes or by actual contact. The parasites form "runs" or "burrows" as they proceed along the surface and into the skin, laying their eggs. They give rise to considerable itching with consequent scratching and multiform eruptions. The itching is generally worse at night when the sufferer gets warm in bed. The parts affected, as a rule, are the skin between the fingers, the front or inner side of the wrist, the front of the forearm, the breasts, the navel, the ankle and foot, the arm-pits, the groins, the genitals, the inner side of the thighs and buttocks. The face and scalp generally escape.

The treatment consists in the free application of sulphur ointment overnight and a hot bath the next morning. This is to be repeated once or twice.

Where there is an objection to sulphur ointment Peru balsam, beta-naphthol ointment, or liquid styrax may be employed instead. Either of these three should be rubbed into the affected places two or three times daily and a bath taken the next day. Another method of treatment is by warm sulphur baths—a full bath of thirty gallons of water to which have been added three ounces of potassa sulphurata—in which the patient should sit for about half-an-hour rubbing himself all the while thoroughly with a flesh brush. All clothes and bed-clothes must be thoroughly disinfected by heat before they are used again.

Itching (Pruritus) **498—499**

This is to be distinguished from itch, as it is a symptom caused by many and different conditions and diseases. There is first the itching caused by "prurigo," a skin disease in the form of little pimples spread all over the body, which persists sometimes through life, and the cause of which is somewhat obscure, though want of cleanliness often accounts for it. Frequent use of soap and warm water, and the employment of sulphur ointment are to be recommended for "prurigo."

Itching is also one of the results of jaundice, gout, diabetes, Bright's disease, and of most skin diseases. Many nervous affections have severe itching as one of their symptoms. Constipation and sluggishness of the liver are also often productive of itching. The same thing may be said of diseases of the womb and the ovaries. Many cases of local itching are due to the presence of a discharge which keeps up a constant irritation. Itching is frequently due to the wearing of woollen underclothes, or to excessive perspiration. Sometimes it is nothing but pure "nervousness," as, for instance, in the case of people who experience intense itching after a bath (bath pruritus) or in cold weather only (pruritus hiemalis), or in women going through the change of life.

In old people there is a senile form of itching which is part of the general degeneration (pruritus senilis).

499. As to the treatment, one should always try to discover the cause and remove it. Where this is impossible, several remedies are available for obtaining relief. They include: A mixture of eau de Cologne and water in equal quantities, applied on lint; sponging with hot water followed by dabbing with lavender water; a strong solution of bicarbonate of soda; a lotion of vinegar and water followed by a hot bath to

which some oatmeal has been added; a lotion of liquor carbonis detergens one or two drachms to the pint of water—well shaken; a lotion of carbolic acid, strength one in sixty; sulphur baths made by the addition of four ounces of sulphurated potash to thirty gallons of water. For the severe itching of the genitals, stronger solutions of the above often become necessary; or a strong solution of subacetate of lead, half a drachm to an ounce of water, may be used. In other cases painting the parts nightly with compound tincture of benzoin (or Friar's balsam) is often very beneficial. In a number of cases I have observed almost instantaneous relief from the use of a lotion of carbolic acid and cocaine, one or two per cent. of each, but the drawback of this remedy is that it has to be employed over and over again as it creates a sort of cocaine habit.

The above local treatments may have to be supplemented by the administration internally of tonics containing iron, strychnine, arsenic, etc. Satisfactory results have also been obtained from taking internally urotropin in 5 or 10-grain doses twice or three times daily, particularly in cases of local pruritus. At the same time, the diet should be carefully regulated. Alcohol, tea and coffee as well as highly-seasoned dishes should be abstained from.

In very obstinate cases recourse has to be had to the application of caustics or electrical treatment and the X-rays also are beneficial in some cases in which other remedies have failed.

Jaundice (Icterus) 500

Jaundice is a yellow discoloration of the skin, mucous membranes and natural secretions caused by an excessive presence of bile-pigments in the blood. The change of colour is noticeable not only in the complexion and in the whites of the eyes, but the urine becomes dark amber or beer-like in appearance, the stools are light or whitish, there is very much itching all over the body, and if there is any perspiration visible, it is decidedly of a yellowish tint. In other directions, too, there are marked symptoms, the pulse is slow, the appetite poor and there is considerable mental depression.

The ultimate causes of jaundice are of two kinds. The one is based upon obstruction to the flow of the bile from the gall-bladder to the duodenum which takes place normally along the biliary duct, such obstruction arising mostly through the presence of gall-stones, parasites, tumours or acute inflammation, the latter constituting the so-called catarrhal jaundice. The other kind is the outcome of disease of the liver proper or of the blood through the influence of poisons like arsenic, trinitro-toluene (the T.N.T. of war-time), alcohol, phosphorus, mercury and others. The jaundice is then one of a number or symptoms.

The treatment of jaundice must necessarily be that of the cause producing it. In the catarrhal form, however, it is usual to treat the jaundice as such. The patient must get into bed. The diet should consist of liquids only, with the exception of milk and other fat substances. Aperients are necessary. As a rule, calomel taken frequently in small doses (say ¼ grain every hour for 6 or 7 hours) is sufficient; if not, an additional purgative may be given, such as Epsom or Glauber salts, or enemata of soap and water should be adminis-

tered. If there is some pain, a mustard leaf or plaster applied for a few minutes over the region of the liver will bring relief. In most cases catarrhal jaundice does not last longer than a few days. Relapses may be avoided by regular attention to the bowels, a careful diet from which alcohol and other stimulants must be excluded, and the drinking of plain warm water in abundance.

The form of jaundice which occurs in newly-born children will be found described under the heading "Icterus neo natorum." (*See also under* "Liver, Diseases of," "Gall-bladder, Diseases of," etc.)

The cases of jaundice seen during and since the war, especially in France and described as "epidemic jaundice," are said to be due to a microbial (spirochetal) infection which is transmitted mostly through contaminated food or water. The symptoms are acute but the mortality of the disease is low.

Jaws, Diseases of the **501**

Several affections of the jaws will be found mentioned under various headings (*see* Index). Here I will consider the diseases associated with the bones and joints of the jaws. A very common one is the inflammation which occurs in the hollow of the upper jaw, called the antrum of Highmore, and which frequently ends in abscess. There is constant deep-seated pain, accompanied by redness and swelling of the cheek and lower eyelid. The treatment consists in extracting the decayed tooth from which the inflammation has spread, or in perforating the jaw bone so as to allow the pus to come out. The subsequent antiseptic precautions are the same as in other similar conditions.

Closure of the jaws may arise from scars following injuries or ulceration, or it may be the outcome of muscular spasm—especially in hysterical females. Complete closure through ankylosis (*see* Joints, Diseases of) is also fairly common. If the closure is more than of temporary duration, operative interference becomes necessary.

Necrosis or total destruction of the jaw-bones may result from syphilis, tuberculosis or—which is commonest—phosphorus poisoning. "Phossy jaw" is not as common as it used to be, but it still occurs fairly frequently among workers in match-factories, especially if they have bad teeth. It affects mostly the lower jaw. The treatment is, of course, of a preventive nature.

Cracking of the jaws, of which many people complain, is generally due to an incomplete dislocation of the jaw-bones, and it is also common in people who are more or less subject to chronic rheumatism. It is more an inconvenience than an illness. By a little practice one can manage to reduce it to a minimum Massage of the jaws may also be attempted

Dislocation of the jaw is a common accident, especially after yawning. The symptoms are characteristic. The sufferer has his mouth wide open and can neither close it or open it further. He cannot chew or talk properly and saliva may run from his mouth. If the dislocation is one-sided only, the mouth is crooked and the chin is pushed to one side. Reduction of the dislocation is not difficult as a rule, and many doctors effect it by a sound box on the ear. The usual method is to press against the back teeth inside the mouth with the thumbs, which must be well protected against being bitten. Or a wedge may be placed between the teeth and pressure made against the chin.

The jaws are subject to fractures of

various kinds. They may be the seat of swellings from an innocent gumboil to very large cancerous growths and they are subject to the various diseases mentioned under diseases of the bones. Lock-jaw is discussed *under* "Tetanus."

Joints, Diseases of **502—508**

We distinguish two kinds of diseases of the joints, acute and chronic. Of the former, acute rheumatism is the commonest, but there are several others which in practice are perhaps not much different, except that they may not be quite so severe in their constitutional effects. (*See under* "Rheumatism.")

Acute synovitis (generally arising from an injury) is an inflammation of the synovial membrane which lines the articular ends of bones forming a joint. It attacks as a rule one of the big joints, the knee, elbow, ankle or shoulder, and only one one at a time, contrary to what happens in acute rheumatism in which as a rule several joints are simultaneously affected. The symptoms of acute synovitis are heat, swelling, tenderness, pain and inability of the joint to act as normally. The redness is not so marked as in acute rheumatism. The illness subsides as a rule in eight or ten days, benefiting from rest and cold applications to the affected joint—followed if necessary by plaster-of-Paris bandages. Sometimes, however, complications occur. Thus the fluid in the joint may remain unabsorbed—constituting the condition known as "water in the knee" (hydrarthrosis)—or the fluid may turn into an abscess threatening the destruction of the joint (acute suppurative arthritis). Or the synovitis may turn into a dry and chronic form, resulting in disintegration of the joint with formation of so-called "loose bodies" or in ankylosis. (*See below.*)

The treatment of these conditions is of a surgical nature all through, though at the beginning painting with tincture of iodine may favour the absorption of the fluid.

503. As to chronic diseases of the joints there are many of them and their classification is a matter of difficulty. For this reason almost every medical author has a classification of his own. I attempt none.

Congenital dislocation of joints—chiefly of the hips—is a common chronic affection, observed principally in girls. The result is a gait which has been compared to the waddling of a duck. The treatment is purely surgical if treatment is attempted at all, the results being rather unsatisfactory. (*See also under* "Hip Disease.")

Ankylosis or stiffness of a joint is a frequent result of disease or accidental injury. The stiffness may be due to fibrous union between the ends of the bones forming the joint or to formation of actual bone between the ends of the joint bones. The latter form of ankylosis is more complete and free from pain, the former allows some little movement and this is accompanied by pain. Sometimes the ankylosis is only an apparent one, the stiffness being due to muscular contraction. The treatment of ankylosis is by surgical operation only, and in many cases it is advisable not to attempt any treatment at all.

504. Chronic synovitis, chronic rheumatism, rheumatoid arthritis, osteo-arthritis, arthritis deformans, trophic arthritis, and other similar affections are to all practical purposes, varieties of the same condition, of which the symptoms are more or less pain in several joints or in one par-

ticular joint, restricted mobility, loss of function, cracking or grating noises, various deformities, etc. They may be the result of one or more acute attacks of rheumatic fever or synovitis, or they may be chronic from the commencement in persons subject to exposure, cold and damp, or following a laborious occupation. Acute attacks may occur at intervals of long or short duration, and are spoken of as exacerbations, or recrudescences.

The cause is frequently a kind of general blood-poisoning proceeding from diseased teeth.

It is well known that these affections are practically incurable, and every watering place or health resort which claims to treat rheumatic diseases is full of invalids of this class, who try one after another in search of an amelioration of their condition. They certainly receive some benefit, but it is only of a temporary nature and this palliative treatment consists in drinking the waters, taking alkaline or other kinds of baths, massage, inunction with cod-liver oil and other such substances. Internally potassium iodide, aspirin, and the salicylates are much prescribed. Recently more or less satisfactory results have been obtained from the application of electricity in one shape or another and also from the use of various serums and vaccines. The method of treatment by local counter-irritation (blisters, scarification, galvano-cautery, etc.) popular at one time is also coming into favour again, some striking results having been reported recently.

505. Radium, particularly in the form of inhalation of radium emanations or in that of drinking radium water is another of the more recent methods of treatment from which I have seen excellent results at one or two of our British Spas. But I cannot say the same with regard to the X-rays, though others have expressed their satisfaction.

For the relief of the pains which are sometimes very severe, local applications of liniment of belladonna or of turpentine are very serviceable. I am also in the habit of prescribing hot fomentations sprinkled with laudanum, and generally with success.

Sufferers from these diseases who can choose their places of residence should live in a warm place free from winds and damp. Frequent hot and Turkish baths help to keep the symptoms in check. (*See also under heading* "Rheumatism.")

506. Tuberculous disease of the joints occurs mostly in children and generally affects one only, chiefly a hip or a knee. The so-called "white swelling" or "tumor albus" is nearly always of tuberculous origin. The symptoms are pain, which is worse at night, lameness, defective movement, swelling, displacement of the bones, contractions, and general wasting. In addition to the treatment adopted in all cases of tuberculosis, the local measures include resting of the affected limb in bed along with the application of plaster-of-Paris bandages, extension and other surgical procedures, opening of any abscesses that may form and other necessary operations. The chances of recovery are not unfavourable if treatment is commenced early enough.

507. Cracking or grating of the joints is generally one of the signs of chronic rheumatism, though it is sometimes noticeable in the absence of other symptoms, such as pain or stiffness. It is especially pronounced in advanced cases of the form of joint-

disease which is known as ostheo-arthritis, and in which the cartilage covering the ends of the bones forming the joint is rubbed away. The noise is then caused by the friction between the bare bones. The symptom is common in elderly people or in those who have worked hard and endured much exposure to wet and cold. The fingers, the toes, the hips and the knees are the joints most affected.

"Loose bodies in joints"—already referred to—may arise also as a result of an accidental injury and as regards the knee-joint they include dislocation or displacements of the semi-lunar cartilages situated within, and forming part of, the joint. The symptoms are excruciating pain and inability to stand or to stretch out the limb affected. If the loose bodies cannot be retained in a position which does not interfere with the freedom of the leg by the use of elastic bandages or other apparatus, there is nothing else left but their removal by a surgical operation.

508. Joints are often the seat of neuralgic pains which may be a symptom of some nervous disease of the nervous system—principally of the spinal cord—such as locomotor ataxy. Such pains may also be "referred pains" for instance in the knee whilst the seat of the disease is in the hip. Or they may be part of a general hysteria—"hysteric joint"—which may be recognised from the existence of other hysterical symptoms and also by the fact that the limb varies its position whilst the pain and sensitiveness are obviously exaggerated. In these cases the treatment depends on the cause, or the ordinary remedies against neuralgia may be tried.

That joints are subject to sprains and dislocations is well known.

The principle in the treatment of both is rest, modified by passive movements, carefully carried out so as to prevent the occurrence of ankylosis. In a dislocation, the first indication is, of course, to replace the joint in its normal position and to retain it there by suitable bandages or appliances.

Kidneys, Diseases of 509—510

The kidneys are subject to a variety of diseases of which Bright's disease (which see) is the most frequent. Others include tumours (such as cancer), tuberculosis, stone in the kidneys and movable kidney. In connection with tumours and tuberculosis, for which the kidney has frequently to be removed by operation, it is worth knowing that a person can live very well with one kidney only, but that kidney must be a healthy one.

Before operating, a surgeon must therefore satisfy himself that such is the case, otherwise he will not undertake the operation.

Stone in the kidney (renal calculus) is a very painful disease which gives rise to the symptom known as renal colic. Often this is mistaken for lumbago or muscular rheumatism. The presence of gravel in the urine is a sign that the pain is more likely due to stone in the kidney than lumbago, especially if it is accompanied by shivering fits and vomiting. Micturition is painful and the urine may contain some blood. Sometimes there is complete suppression of the urine. By the aid of the X-rays it is now possible to ascertain whether a case is one of renal calculus or not.

A seizure of renal colic is best treated

by hot fomentations or hot poultices, and opium or morphia may be given to allay the extreme pain. Locally, belladonna liniment is sometimes very effective. To combat the tendency to the formation of further stones in the kidneys the patient should take alkaline remedies, such as citrate, acetate, or bicarbonate of potassium in 30 or 40-grain doses in three or four ounces of water two or three times daily. He should also drink plenty of water, and avoid all alcoholic beverages. The diet should consist largely of farinaceous and vegetable food.

Those who can afford it should go for a cure to Vichy, Contréxeville, Wildungen, Ems, or Carlsbad, or drink at home the mineral waters coming from those places.

In some cases the symptoms cannot be relieved by internal or external remedies, and an operation becomes necessary.

510. Movable or floating kidney is an affection present more frequently in women than in men, more frequently on the right side than on the left, and oftener in thin than in fat persons. The age of the patients is generally between thirty and forty, and one of the most frequent causes of the complaint is a succession of pregnancies, especially at short intervals. There can be no doubt that tight-lacing is in many cases an important contributory cause.

The usual symptom is a sensation of weight, dragging or pain in the abdomen and loin, which is generally relieved by lying down. Sometimes acute symptoms occur almost like those of renal calculus, the reason being some twist of the kidney in consequence of overexertion. In addition, there generally are more or less symptoms of a neurasthenic nature, and many of the patients show signs of wasting. The treatment is by means of specially-made trusses, pads, or bandages. Where these do not bring relief, the question of operation comes into consideration. A fattening diet should be tried in every case.

Movable kidney is often discovered accidentally when an examination is made for some other purpose. When there are no symptoms present, such as pain, no treatment is required except that the patient may be advised to undergo a rest cure. (*See also* "Albuminuria," " Diabetes," etc. Consult Index.)

Kleptomania **511**

I am bound to include kleptomania among the diseases treated in this volume, because it unquestionably cannot in many cases be explained otherwise than that it is the result of a disordered brain and consequently a form of insanity. Even where the evidence proves that the thefts have been committed with premeditation and systematically and not on the impulse of the moment, the element of insanity cannot always be excluded. What is one to think of a well-to-do lady, the wife of a highly respected public official whose weakness is to steal teaspoons at restaurants and private houses which she puts away in a drawer and never troubles as to what becomes of them, not being aware that her husband is constantly returning them to their owners or to the police if he cannot find out to whom they belong? And yet, in every other respect the woman is perfectly normal and rational.

On the other hand the plea of kleptomania is frequently put forward without any excuse and each case must therefore be treated on its merits. The

subject is one of extreme difficulty and demands much tact from everybody concerned. What to do with kleptomaniacs is a puzzle not easily solved. Even detention in an asylum is not always successful. A girl kleptomaniac whom I knew continued her operations at the asylum, pilfering things from the nurses and the other inmates.

Knee, Diseases of 512—514

The knee is subject to the various diseases and injuries discussed under the heading, "Joints, Diseases of." The following few remarks are therefore additional to what has already been said there.

The knee is more often the seat of disease or deformity than any other joint in the body. In children tuberculous disease of the knee is particularly common, and it is also seen occasionally at nearly every other age. Many deformities arise in consequence of it. Others are the result of infantile paralysis. The deformities most frequently seen are knock-knee and bow-knee. They are generally due to rickets in childhood. Knock-knee may be either uni-lateral or bi-lateral, that is only one knee may be affected or both. In children under six years of age there is always the possibility of a recovery, after that age the possibility diminishes gradually. At eighteen or twenty all chances are gone, except those of an operation.

The treatment is directed towards the cure of the rickets which is the cause of the deformity. As long as the disease is amenable to treatment every means must be adopted to combat it. The child must not be allowed to stand or walk, and the limbs should be massaged regularly twice a day, finishing each time with manipulations intended to correct the deformity. Suitable apparatus must be worn, if necessary. In severe cases which do not yield to treatment by bandages, etc., an operation promises the best results if undertaken as early as possible.

The above remarks apply equally to bow-knee, except that this deformity is nearly always bi-lateral. (*See under* "Bow-legs.")

513. The patella or knee-pan in front of the knee-joint is subject to fractures and dislocations which may arise not only from direct violence but also from sudden muscular contractions. Very often no other treatment succeeds in keeping the fragments of a broken patella together than wire sutures or other surgical measures. After injuries to the patella and knee-joint, generally it is advisable to wear an elastic knee-cap for many months. It is well known that footballers are particularly liable to injuries to the knee-joint, and especially dislocations of the patella. Reduction of the latter is effected by bending the thigh at the hip and stretching the leg.

514. Displacement of structures within the joint is an affection peculiar to the knee and it is often spoken of as dislocation of the semi-lunar cartilages—an accident liable to occur over and over again. The first symptom is a sudden inability to use the joint, which becomes like locked, and this is accompanied by most intense pain. If the displacement occurs during walking the patient falls down to the ground. The knee quickly becomes swollen. Reduction is as a rule easy, indeed it often takes place of its own account. The leg should be stretched whilst the thigh is bent at a right angle to the body. To prevent recurrence a supporting knee-cap should be worn for some time.

Knee-Jerk **515**

The knee-jerk or patellar reflex which doctors frequently test is an involuntary movement of the leg obtained by striking sharply the tendon under the knee-cap with the edge of the hand or that of a book, whilst the attention of the patient is directed to something else. It is present under normal circumstances, but absent in locomotor ataxy and some other diseases of the nervous system. On the other hand, it is exaggerated in diseases of the brain, nervous irritability, neurasthenia and other affections. The absence, presence, or exaggeration of the knee-jerk alone cannot be depended upon absolutely in forming a diagnosis, but it is a valuable supplement to other existing symptoms.

Lachrymal Apparatus, Diseases of **516**

The affections of the organs secreting the tears and of the passages along which they find their way into the nasal cavities will be found described under the heading "Eye Diseases." I might perhaps mention here that acute inflammation of the lachrymal gland has recently been rather more common than formerly, possibly as one of the results of the popularity of motoring. The symptoms are rapid and great swelling of the eyelids and conjunctiva, thickening of the skin over the gland in the outer corner of the upper eyelid, enlargement of the small lymphatic gland in front of the ear and much pain on the affected side of the face. The treatment is that of ordinary inflammation; cold bandages at first and afterwards, hot fomentations, leeches to the temples and an incision, if necessary, or if there are signs of an abscess forming. As the eye may become involved it is advisable to obtain medical assistance at as early a stage as possible.

Laryngitis **517—518**

By laryngitis we understand an inflammation of the larynx—or voice box—situated at the top of the windpipe. There are two kinds of laryngitis, acute and chronic. The former may be caused by sudden changes in the weather, by exposure to cold and wet, by excessive use of the voice, by immoderate smoking or by the inhalation of irritating dust vapours or chemical substances. It is also a possible accompanying condition of several diseases such as measles, scarlet fever, diphtheria, nasal catarrh, rheumatism, syphilis, etc.

The symptoms of acute laryngitis are dryness in the throat and huskiness of the voice, or total loss of the latter. There is generally some cough of a tickling or irritating nature with but little expectoration of viscid mucus occasionally tinged with blood. There may be pain, especially when swallowing.

A form of laryngitis of a very alarming nature occurs sometimes in children very acutely—often in the middle of the night—looking almost like suffocation. This is called stridulous laryngitis, laryngismus stridulus or spurious croup. The attacks generally pass away without doing much harm, but they are apt to recur frequently, particularly if the child is subject to rickets.

An attack of laryngismus stridulus is recognised by the spasmodic holding of the breath for a few seconds, after which the air rushes out with a harsh sound. (*See* "Croup.")

Acute laryngitis is best treated by inhalations of steam from a sponge, some suitable apparatus, or an ordinary water-jug. To the boiling water may

be added medicants like carbolic acid or Friar's balsam—in the proportion of about a teaspoonful to a pint. The patient should keep to his room, spare his voice as much as possible, and observe a light diet. The sucking of small pieces of ice is very helpful. If possible the atmosphere in the room should be kept moist by the use of a bronchitis kettle. In some cases cold bandages round the throat are very serviceable.

In an attack of laryngismus stridulus the recognised treatment is to administer an emetic such as sulphate of zinc—from 5 to 10 grains—or ipecacuanha wine in teaspoonful doses every ten minutes until vomiting takes place. At the stame time hot flannels or a hot sponge should be applied to the throat. Children subject to these attacks on account of their rickety condition must be treated accordingly.

518. Chronic laryngitis is generally the result of the acute form—when the latter is neglected or it may be a consequence of continuous strenuous use of the voice. For this reason it is seen frequently in singers, ministers, teachers, public speakers, auctioneers, hawkers, etc.

The symptoms are practically the same as in acute laryngitis except that they are not always severe and that they only become so at longer or shorter intervals. Where the chronic laryngitis is one of the accompanying conditions of tuberculosis, chronic alcoholism, syphilis, or other disease—and this is frequently the case—the symptoms will, of course, be complicated accordingly. In tuberculosis, for instance, there is also as a rule disease of the lungs present; the patient coughs and expectorates much, very often he spits blood; examination with the laryngoscope reveals inflammation and ulceration of the larynx and vocal cords.

Chronic laryngitis is a troublesome complaint and it requires the greatest perseverance to cure it. The patient must protect himself against the vagaries of the weather, and if his means permit he should live in a warm climate. He must rest his voice as much as possible and use regularly some local application to the throat, preferably by means of a laryngeal brush—which, of course, requires caution. A very efficient one is a solution of copper sulphate, ten grains to the ounce of water or glycerine. Another useful astringent for the purpose is a one per cent. solution of protargol. As an inhalation the following renders good service: Eucalyptus 3 grains, spirit of camphor 4 drachms, compound tincture of benzoin enough to make two ounces. Two teaspoonfuls to a pint of hot water. Inhale morning and evening, but do not go out immediately afterwards.

Gargles are as a rule insufficient to reach the larynx, but one of glycerine of tannic acid, properly diluted, may be tried in simpler cases.

Where the cause lies in tuberculosis or syphillis the appropriate treatment must be adopted in addition to local applications.

Patients suffering from laryngitis, acute or chronic, are better without smoking, and they should take their food cold rather than hot. It is better for them to abstain from alcoholic and other stimulants.

Laryngoscope **519**

This is a little mirror which when applied to the roof of the mouth permits the examining doctor to see the larynx of the patient. He generally wears on his forehead a reflecting

mirror which throws rays of light into the laryngosoope and the patient's throat. As the introduction of the instrument causes in some people an irritable cough it is often necessary to make the throat insensitive first by painting it with cocaine.

The laryngoscope was invented by the well-known singer Garcia, who died not long since at the venerable age of one hundred years.

Larynx, Diseases of 520

In addition to acute and chronic laryngitis, the larynx is subject to various other diseases and injuries. The commoner ones are: Spasm of the vocal cords, already mentioned under laryngitis as laryngismus stridulus; various paralyses of the vocal cords manifested by complete or partial loss of the voice, shortness of breath, inability to cough, etc. (*see under* "Paralysis"); hysterical aphonia or voicelessness (*see under* "Hysteria"); tumours, especially cancer and polypi, for which the only rational treatment is removal by the knife; tuberculosis (*see under* "Laryngitis"); foreign bodies in the larynx which cause symptoms of suffocation, violent coughing and possibly blood-spitting. The entrance of such foreign bodies (peas, marbles, etc.) takes place, as a rule, accidentally; sometimes the occurrence is not noticed, or forgotten, and then symptoms may not arise until weeks or months have passed. Pneumonia frequently results under such circumstances, as does also abscess in the lungs. To effect the removal of a foreign body from the larynx in the case of a child, a good plan is to hold it by the heels, head downwards, and to encourage coughing by slapping it on the back. If this is not effective and a doctor cannot reach the object with ordinary forceps or special instruments, the operation of tracheotomy or laryngotomy (opening of the trachea or of the larynx) may become necessary. Remote symptoms require appropriate treatment or operative interference.

Lead-Poisoning (Plumbism) 521

Those who work in lead or lead-salts, such as painters, plumbers, typefounders and compositors are very liable to be attacked by chronic lead-poisoning. Accidentally this may also happen through drinking water which has become contaminated with lead from the cistern in which it was stored, or in other ways, as for instance through hair-dyes, through taking snuff packed in lead paper, and so on.

Alcoholic subjects are notoriously more liable to be attacked than others, although there appears to exist a sort of predisposition to lead-poisoning which is more marked in some people than in others.

The principal symptoms of lead-poisoning are: Lead-colic, paralysis and other nervous manifestations, a blue line on, and sponginess of, the gums, anæmia and general debility, disturbances in the eyesight, etc.

Lead-colic is a very painful affection of the bowels, and it is often accompanied by vomiting. As a rule, there is extreme constipation and hardness of the abdominal muscles.

The chief feature of lead paralysis is a characteristic drooping of the wrists—known as wrist-drop, and sometimes other parts are affected as well. Of the nervous symptoms one sees very often headaches and all sorts of pains and aches in muscles and joints, or the sensation known as "pins and needles"—which is an

exaggerated sensitiveness of the superficial nerves.

Chronic lead-poisoning may easily lead to gout or disease of the kidneys.

The treatment of chronic lead-poisoning is more with a view to prevention than cure. Every precaution must be taken to avoid the entrance of lead into the system, including repeated ablutions, especially before touching food of any description. For an attack of lead-colic the best remedy is an ounce of castor oil with 15 or 20 drops of laudanum. Hot poultices also ease the pain considerably.

Where there are nervous symptoms present, iodide of potassium in 5-grain doses three times daily is the recognised remedy, with a view to eliminating the lead from the organism. Massage and electricity are also very useful.

Leeching **522**

This treatment is seldom used nowadays. The abstraction of blood by the application of leeches is practised sometimes in inflammations near the eye and the ear, and is useful also in inflammations in other parts. Before applying the leech, the part should be washed carefully, all remnants of soap or liniments being removed scrupulously, otherwise the leech will not bite. If the skin is smeared over with a little milk or blood, biting will be facilitated. A leech will abstract from half to an ounce of blood and will generally drop off when full. If there is some difficulty in removing the leech a little ordinary salt sprinkled on it will do away with it. Leeches should not be applied where the skin is thin or loose as, for instance, on the eyelid or on the scrotum. If the bleeding continues after the removal of the leech, the application of a pad of lint and a firm bandage will stop it.

Left-Handedness **523**

This subject has received some attention lately in view of the recommendation frequently heard that children showing a tendency to this abnormality should be discouraged from following their inclination. The opinion seems to find favour that rather than discourage any existing left-handedness, it should on the contrary be encouraged. Experiments have shown that attempts to train the right hand against its natural inclination are, as a rule, devoid of success, just as attempts to train the left hand under normal conditions are seldom successful. Moreover, where it has been possible to train the left hand satisfactorily, this has been accomplished at the expense of the right hand, which appears to show that Nature does not favour ambi-dexterity.

Leprosy (Lepra) **524**

It was believed up to recently that leprosy, though still prevalent to a large extent in tropical and sub-tropical countries, such as India, occurs in Europe only in its northern territories, especially Norway and Ireland. But recent investigations have shown that there has been a remarkable increase in the number of lepers all over the European continent and particularly in France.

Leprosy is admittedly an infectious disease transmitted through the intermediary of a microbe—the Bacillus lepræ. But there must be the closest contact between the individuals concerned for the infection to take place. An indirect method of contagion was a little while ago discovered in the large number of wigs coming from

China where leprosy is very prevalent, and it is sufficient here to call attention to this possible means of infection. A small number of medical men are of the opinion that leprosy is due chiefly, if not entirely, to dietetic errors, especially the consumption of tainted fish; but there does not seem to be sufficient evidence to warrant such a view.

We distinguish two forms of leprosy, the tubercular or nodular and the anæsthetic. The first attacks the skin, beginning with an inflammatory eruption which eventually leads to ulcerations and deformities, especially about the face. The second commences with pains and increased sensibility owing to the nerves being principally affected. This also leads in time to deformities, including the loss of fingers and toes. Frequently the two forms of the disease go together.

The treatment of leprosy is not quite so hopeless as it used to be, though it is by no means always satisfactory. Good results have been obtained from the use internally of chaulmoogra oil, and especially a refined preparation of the same known as antileprol. The X-rays have also been beneficial in a number of cases. In others, injections of nastin—a vaccine preparation—are said to have been followed by marked and rapid improvement.

The only means by which leprosy can be prevented from spreading is a thorough isolation and supervision of the sufferers which need not necessarily be accompanied by hardships or discomfort. A traveller who recently visited a leper colony reported that he found the inmates comparatively happy and contented. They even have their racecourse and ballrooms and "some of the women go to the dances in evening dress."

Leukæmia **525**

Leukæmia is one of the diseases of the blood of which the characteristic symptoms are a considerable increase in the number of white blood corpuscles, a considerable decrease in that of the red blood corpuscles, which also undergo several alterations in size and shape, an enlargement of the spleen and lymphatic glands. The disease is practically a severe form of anæmia which, as a rule, ends fatally. The treatment to be attempted is the same as demanded by pernicious anæmia. (*See under* "Anæmia," "Blood, diseases of," etc.)

Leukodermia (Vitiligo) **526**

A disease seen especially in tropical countries and among dark races characterised by the formation of white spots on the skin in various parts of the body, which may attain very large dimensions. The cause is not understood, though exposure to the sun may account for it partly. The change of pigmentation is often accompanied by nervous symptoms. In India the disease is often called white leprosy, but the two conditions have hardly anything in common. The treatment is extremely unsatisfactory. Tonics, especially those containing arsenic, may arrest the process, and where the white patches are very conspicuous they may be slightly stained with walnut juice to make the contrast with the surrounding skin less striking. (*See also* "Albinism.")

Leukoplakia (Smokers' Tongue) **527**

This is a chronic condition which frequently causes much and unnecessary alarm. The tongue appears covered with small wart-like swellings of a

whitish or yellowish colour which in the vast majority of cases arise from excessive smoking or continued irritation by carious teeth, and the only serious thing about them is that rarely they may in course of time become or develop into cancerous growths. Otherwise they cause no pain or inconvenience, and are for this reason often neglected. The treatment is one of prevention. Smoking is to be prohibited and no food or drink should be taken more than moderately warm. Application locally of carbolic acid lotion—half or one per cent. strong—or of a five per cent. solution of chromic acid may be tried. Severe cases require the use of caustics—to be employed with great caution and under a doctor's supervision. Milder cases often improve spontaneously.

Among other names by which this condition of the tongue is known are "geographical tongue," "lingual corns," and "psoriasis of the tongue." Occasionally the mucous membrane of the mouth is similarly affected.

Lichen **528**

By this name we distinguish a group of eruptions of the skin, the chief characteristic of which is the appearance of pimples or little nodules in the form of half or whole circles. These are present all over the body, but chiefly on the trunk—back and front—and they follow the lines between the folds of skin. They are usually covered with fine scales and occasion at times considerable itching whilst they feel greasy to the touch. There are several varieties of lichen, the commonest being "lichen planus"—so named because of the flat shape of the pimples, "lichen ruber," of which the pimples may form large, red patches, and "lichen scrophulosus," a form seen in scrofulous children.

When the eruption has disappeared there is generally left behind a brownish pigmentation or discoloration, especially if the legs have been affected. The treatment is by local application of anti-parasitic lotions or ointments containing mercury or carbolic acid, and the administration internally of tonics containing arsenic and iron.

Life-Assurance **529**

Many persons neglect to assure their lives when they are young and in good health because they fear the ordeal of undergoing a medical examination. I wish to dispel this mistaken oversensitiveness. Nothing is so safe a guide that one is in good health as when he has "passed the insurance doctor." On the other hand rejection by the doctor often means prolongation of life, as attention being thereby called to something being wrong, the necessary precautions can be taken in time.

When going to a doctor to be examined for life assurance always be prepared to make water in his presence so that he may examine it for sugar and albumen if necessary. Most people urinate before going into the doctor's house, the result being waste of time all round.

A candidate for life-assurance must answer to the doctor examining him all the questions relating to his personal and family history. Should he decline to do so or give answers not in accord with the facts, this would render him liable to the loss of all privileges arising from the policy of insurance, because a correct answer might have caused the doctor to reject the "life." This applies, for instance, to hereditary

diseases, such as cancer, the existence of which in the parents or relatives of the candidate is a circumstance which a doctor ought to be made acquainted with in every case.

Light, Treatment by 530

In addition to the X-rays, there are several other methods of treatment by rays proceeding from a strong light—artificial or natural—the most frequently employed being electric arc lamps, incandescent lamps, and the Finsen rays. The two first-named are applied for the relief of a number of diseases, including muscular rheumatism, lumbago, neuritis, neuralgia—particularly sciatica—and others.

The Finsen-rays when first introduced for purposes of medical treatment by Finsen were collected through water lenses from natural sunlight, but owing to the uncertainty of obtaining the latter at all times it was replaced by large electric lamps of the arc type. The Finsen light is now used almost exclusively for the treatment of lupus.

Lips, Diseases of 531

The lips are subject to a number of affections most of which will be found discussed under different headings. Among them may be mentioned herpes, cracks, and fissures, ulcers and other inflammatory processes, nævi or birth-marks, boils and carbuncles, cysts and other tumours, mucous patches, various deformities including hare-lip, bites and injuries from the teeth or otherwise, etc.

Cancer in the form of epithelioma is fairly frequent on the lower lip of persons who smoke a clay pipe. It generally begins as a small ulcer or warty growth, and grows slowly until it attains big proportions. The sooner it is removed by an operation, the better.

Sordes are crusts seen on the lips and teeth of patients suffering from some exhausting disease, and they are best removed by repeated cleansing with a soft rag or brush dipped in a weak solution of permanganate of potassium.

Liver, Diseases of 532—535

The liver is subject to a number of diseases, the commonest of which are gallstones (*see* "Gall-bladder, diseases of"), catarrhal or inflammatory jaundice, cirrhosis, and cancer.

Catarrhal jaundice is especially frequent in younger people. It is generally accompanied by indigestion, but there is, as a rule, no pain. There is, however, constipation. For further details, *see under* "Jaundice."

Cirrhosis is a chronic inflammation of the liver, causing the organ to become swollen and enlarged, and is in the vast majority of cases due to excessive use of alcohol. The symptoms are indigestion and loss of appetite, a furred tongue, and vomiting, especially in the morning. Jaundice is not always very pronounced, though it is usually present, but there is nearly always marked dropsy—which goes by the name of ascites—in the abdominal region. Another alarming and frequent symptom is vomiting of blood—hæmatemesis—which is sometimes directly fatal. Hæmorrhages from the gums, nose, and other parts are also frequent.

The urine is beer-like in colour, but the fæces are pale; sometimes they look normal.

Cirrhosis is generally fatal within a few months of the appearance of the ascites. In cases seen early, when the jaundice is only slight and there is no ascites, much can be done by immediate withdrawal of all alcohol and the

adoption of a plain diet. On the appearance of ascites purgatives become necessary, and if these are insufficient, the operation of tapping must be resorted to.

533. A milder form of cirrhosis of the liver occurs frequently and is known as hyperæmia or congestion. Popularly it is spoken of as sluggishness or torpidity. The cause is commonly over-indulgence in the pleasures of the table accompanied by a sedentary life. The symptoms are practically those of cirrhosis, excepting for the jaundice and the dropsy, which are generally absent, and there may also be some diarrhœa or constipation present. The treatment demands rest in bed, liquid diet, avoidance of alcohol, and an aperient like calomel or senna, and the drinking of much water. Taraxac is a favourite tonic in sluggish liver. It may be taken in the solid extract in 5 to 15gr. doses, or in teasponfoul doses of the liquid extract. For bilious children, taraxac cocoa in tablespoonful doses at breakfast is a very useful preparation. Buttermilk or skimmed milk can also be recommended.

534. Cancer of the liver is in most cases secondary to cancer of some other organ, principally the stomach or bowel. Where it is not, it is very often preceded by gall-stones. The symptoms are acute pain almost from the commencement, a curious circumstance being that the pain is often in the right shoulder. The liver is visibly enlarged. There is jaundice in about half the number of cases and though there often is ascites, in many instances there is none. The most marked symptom is the gradual and constant loss of flesh, the patient becoming pale, weak and emaciated.

535. The duration of the illness is about twelve months, rarely more, often less, and the end is nearly always fatal. The treatment can only consist in palliating and relieving the symptoms, such as the constipation, pain, or flatulence. Even surgical interference promises little.

Of the other and rarer diseases of the liver, I can only mention abscess, of which there is a tropical form seen in hot and humid climates, hæmorrhage into the liver—called also apoplexy of the liver, acute yellow atrophy, a very serious disease resembling phosphorus-poisoning, seen in connection with pregnancy, but fortunately very rare, fatty degeneration of the liver, hydatid disease or hydatid tumour caused by a parasite worm named tænia echinococcus or hydatid, syphilis of the liver, etc. The treatment of these diseases, if treatment is attempted at all, is nearly always of a surgical nature.

See also under "Biliousness," "Ascites," etc. (Consult Index.)

Locomotor Ataxy 536

Locomotor ataxy or tabes dorsalis is a chronic disease of the spinal cord —the marrow contained in the spinal or vertebral column—the chief characteristic of which is loss of the power of co-ordination of the various movements of the body. It is seen mostly in men at the age of between twenty and fifty, rarely at any other age.

The earlier symptoms of locomotor ataxy are acute pains in the limbs, a feeling of constriction round the waist (girdle-pain), the "lightning-pains" all over the body which resemble sudden electric shocks, and which are often mistaken for rheumatic pains, failure of the pupil to contract as usually when stimulated by light, though it does contract for the purpose of looking at near objects

("Argyll-Robertson pupil"), and loss of sensation in the lower extremities. The gait is more or less staggering, there is an inability to walk in the dark or with the eyes closed.

As the disease progresses, other symptoms appear in connection with various functions of the body, including loss of control over the bladder, impairment of the sight, etc. But the inco-ordination or ataxy is the most marked symptom of all. The patient finds it very difficult to walk straight, and he easily loses his balance when trying to turn round. If he shuts his eyes, he sways to and fro, and falls if not supported. Later he walks with a distinct jerk, throwing his foot out each time he raises it, and bringing the heel down with force. Then there are the "gastric crises" consisting of pain in the stomach with more or less severe vomiting.

Locomotor ataxy is extremely chronic, that is, the symptoms may remain stationary for years. Very rarely it terminates in general paralysis.

One of the earliest signs of the disease is the loss of the knee-jerk or patellar reflex. (*See under* "Knee-jerk" and "Reflex.")

The treatment of locomotor ataxy is not satisfactory. Anti-syphilitic remedies like mercury and potassium iodide, though frequently employed are rarely of much use. Nor has salvarsan proved of much value though in a few isolated cases successes have been reported. Electricity is of some benefit in a few cases. The best plan is to treat the symptoms as they arise, to ease the pain, to re-educate the muscles to perform their usual work by a choice of suitable exercises, including the so-called Swedish movements which are a series of graduated exercises performed under an expert's supervision, and so on. Baths and massage are of considerable help.

Love-Sickness **537**

I do not wish to be charged with frivolousness for devoting in a serious book some space to a matter generally regarded with amusement, but the subject of love-sickness has recently been investigated from the purely medical point of view with rather startling results. Not only does love-sickness frequently lead to neurasthenia, hysteria, and mental disturbances, but more or less grave organic disease of the heart and the circulatory system generally has been traced to love trouble. In some instances it has been proved that the development of tuberculosis was hastened through this cause, and the explanation lies of course, in the circumstance that disappointment and sorrow lead to a depression of the general vitality and a lessening of the resisting power against disease. One must therefore begin to attach some importance to the so-called "broken heart," as a cause of death, in the sense that grief and anxiety may produce serious constitutional illnesses.

The suggested treatment of love-sickness by medicines, senseless as it may appear on a first glance, has consequently a scientific explanation, and although, as it has been jocosely remarked, we are a long way from discovering the bacillus of love, we must not look upon a possible future love-vaccine or serum altogether as a fanciful product of the imagination.

Lungs, Diseases of **538—542**

The principal diseases of the lungs will be found discussed under their

respective headings, such as asthma, bronchitis, consumption, pleurisy, pneumonia, whooping cough, etc. Here I will only make a few general remarks and deal with one or two affections of the lungs which are, as a rule, the outcome of one of the more frequent diseases.

Disease of the lungs reveals itself by the presence of several signs for which doctors look or listen, with or without the stethoscope, when they examine the chest. These include the manner of breathing, the number of respirations (which, in a healthy adult is from 16 to 20 per minute), the resonance of the chest when it is struck against directly or indirectly by the finger of the examiner, the resonance of the voice when pronouncing certain words particularly suitable for the test—hence the mysterious "ninety-nine" which often causes surprise or amusement—or when giving a cough, and a number of others of a rather more technical nature. Under certain circumstances the bacteriological examination of the expectoration is undertaken, especially with a view of determining the presence or absence of tubercle or other bacilli.

The respective diagnostic methods by which the above signs are obtained are called: inspection, percussion, auscultation, palpation, microscopy, and so on.

539. Of the secondary lung diseases which result from others preceding them, chiefly bronchitis, emphysema is perhaps the commonest, and it also often occurs independently in persons whose occupation entails prolonged efforts on the part of the organs of respiration such as glass-blowers, players of musical wind instruments, etc.

The nature of emphysema is a loss of the elasticity of the lungs which prevents them from expelling the air of respiration, with the result that the chest remains permanently more or less inflated and barrel-shaped.

The symptoms are shortness of breath, cough, and difficulty to bring up the expectoration, a quick pulse and early exhaustion. Palpation of the chest shows almost total absence of the normal vocal resonance. The respiration sounds are heavy and accompanied by much wheezing and rattling. In very chronic cases the heart also becomes involved.

The treatment of emphysema is more of a preventive and hygienic nature. Where the cause lies in the employment or occupation of the sufferer he must take measures accordingly, or choose some other form of livelihood. The cough and other symptoms may be relieved by the adoption of the remedies mentioned under "Bronchitis." When the cough is very troublesome mustard poultices applied to the back or front of the chest may be tried. Occasionally relief is obtained from the administration of compound liquorice powder in teaspoonful doses at night-time. It may be given in a little milk or water.

For confirmed emphysematic patients there are special appliances for treatment with compressed air and so-called pneumatic chambers. They are also taught to breathe whilst exercising pressure against the chest on expiring the air. If possible they should live in a dry warm climate, where there are no winds and dust. Bournemouth, Torquay, and Penzance are suitable places for the majority of patients, but I have known some whom they did not suit. As a matter of fact emphysema and asthma often go together, and what I have said in this respect under

"Asthma" applies equally to both conditions.

540. Another complication of lung diseases, though it may also occur independently, for instance through the entrance of a foreign body into the lung, is gangrene. It is characterised by an intense ill-odour of the breath and expectoration, and is accompanied by much fever, severe sweating, blood-spitting, and other distressing symptoms. Occasionally, however, the disease is arrested through the abscess in the lung becoming encapsuled and circumscribed, but relapses are common.

The treatment of gangrene of the lungs is by inhalation of antiseptic remedies, like creosote and eucalyptus oil, as described for chronic fœtid bronchitis. Where it is not sufficient, and the circumstances favour operative interference the latter must be resorted to.

541. Of other and rarer diseases of the lungs, I may mention bronchiectasis or dilatation of the bronchial tubes—really a form of chronic bronchitis; atelectasis or compression of the lungs with consequent imperfect expansion of the air-cells and bronchioles which may be either congenital or a result of tumours in the chest or other diseases like curvature of the spine; the chronic forms of pneumonia which occur in connection with certain trades (anthracosis or miner's lung; chaliosis or stonemason's lung, siderosis or steel-grinders' lung, tabacosis or tobacco workers' lung, etc.), and which are included in the general designation pneumonoconiosis or dust-laden lung; hæmorrhage into the lung through embolism or thrombosis; congestion of the lungs with œdema which occurs in the last stages of illnesses like Bright's disease, heart disease, chronic alcoholism, etc., and for which venesection is often practised; hypostatic congestion after surgical operations or in feeble bed-ridden persons, etc.

It is perhaps as well to mention in this connection that the presence of black particles in the expectoration of most people living in large towns, particularly where there is a lot of black smoke, or which are frequently subject to fogs, is not a dangerous sign if there are no other symptoms of lung trouble. But if the person concerned is suffering from a chronic cough and shortness of breath the additional irritation caused by the particles of carbon or dust must be regarded with seriousness.

542. The lungs are subject to injuries subsequent to wounds of the chest. Such injuries are generally very serious, and they may also lead to pneumonia, pleurisy, and other complications. In gunshot wounds of the lungs it is no longer customary to try and extract the bullet. After arresting the hæmorrhage, which is the first indication, the next steps are determined by the course of events, and operations are undertaken only where a special necessity exists.

Primary cancer of the lungs is extremely rare, and the same remark applies to the parasitic diseases known as hydatid.

Lupus **543**

Lupus, called also lupus vulgaris, is a tuberculous affection of the skin of the face, though it may attack other parts of the body as well. It begins as a small pink spot and gradually enlarges. Small nodules form, and eventually the skin breaks down and ulcerations with subsequent scars result. There is usually no pain or itching, but the disease is very destruc-

tive of the tissues round the part affected. Otherwise the patients who are mostly young persons of either sex are in good health. The treatment is that of tuberculosis generally, though much benefit is now derived by treating lupus with the X-rays, the Finsen light apparatus—either sunlight or electric—carbon dioxide snow, radium, or by ionic medication.

Many of the methods formerly used, such as scraping, cauterization, scarification, etc., are now almost entirely superseded by the above.

The form of lupus which in contradistinction from the ordinary form is known as lupus erythematosus or "butterfly lupus," differs in so far that it is not of tuberculous nature and that it is generally seen in adult females. It attacks the bridge of the nose, the cheeks, and sometimes the ears as well, and takes the shape of round red patches of inflamed skin, with or without a scaly covering. This form of lupus does not cause ulcerations, and is not so severe as lupus vulgaris. On the whole, the treatment is much the same in both forms, though in lupus erythematosus in its early stages such simple applications as lead lotion, zinc ointment, ichthyol soap, or a paint of equal parts of rectified spirit and ether are sufficient. Or the patches may be rubbed with a flannel soaked in tincture of green soap. More advanced cases should be submitted to treatment by a doctor, who will probably have recourse first to carbon dioxide snow, which promises the best results.

Lymphatic System, Diseases of 544

The lymphatic system consists of a network of lymphatic vessels which act as auxiliaries to the blood vessels all over the body, and carry off the lymph—the liquid portion of the blood which oozes out from the capillaries. The lymph then filters through the numerous lymphatic glands, to be collected eventually in one comparatively large tube called the thoracic duct, which empties itself into the venous circulation on the left side of the neck. One may compare the lymphatic system with that of a reservoir. Numerous small rivulets bring the water to a central storing station where it is filtered by passing through suitable filtering material. From a number of such storing stations the waters then join and form a large reservoir where it is filtered once more before being allowed to enter the town's water supply. From there it is then distributed as pure drinking water to all parts through a system of water pipes and cisterns.

Diseases of the lymphatic system may therefore affect either the lymphatic vessels or the lymphatic glands. With the latter I have already dealt under the heading "Glands, Diseases of." The former include inflammation (lymphangitis) as exemplified in cases of blood-poisoning. The poisonous material is absorbed along with the lymph of the neighbourhood, it travels along the lymphatic vessels which become inflamed and painful, showing through the skin like red lines, the glands along the course are involved and swell, occasionally turning into abscesses, as for instance in bubo, and in severe cases, whole limbs or the entire system participates in the inflammatory blood poisoning, frequently with fatal results. (*See* "Inflammation.")

Another frequent affection of the lymphatic vessels is their enlargement, sometimes to a great extent, owing

to their becoming blocked up with lymph. An example of this condition we have in elephantiasis. This enlargement and dilatation of the lymph vessels is spoken of as lymphangiectasis.

Lymphangioma is a tumour consisting of a large number of lymphatic vessels, and for which the treatment is essentially surgical.

Madura Foot **545**

A disease seen frequently in India and characterised by the formation on the foot of a purplish swelling which in time turns into an abscess of an extremely chronic nature. The pus evacuated contains little bodies resembling fish-roe. The disease is caused by a fungus, or mushroom-like vegetable organism, hence the other name—mycetoma—by which it is known. Similar conditions occur also on the hands or on the trunk. The treatment is by surgical operation, or if necessary by amputation. Madura foot is a variation of actinomycosis (which see).

Malaria **546—549**

Malaria or malarial fever, which used to be known by the name of ague, is an endemic disease—that is, it occurs regularly in definite localities owing to causes prevailing there and nowhere else. It is now established beyond doubt that the cause of malaria lies in the invasion of the blood by a minute parasite called plasmodium malariæ, or hæmamœba, of which there are several varieties, and that it is introduced into the human system through mosquito bites. The method of infection is as follows: A mosquito, generally of the Anopheles species, bites an individual suffering from malaria and extracts from his blood a number of the parasites. These undergo in the body of the mosquito certain changes and are afterwards transferred by another bite into the blood of another individual. Once in the, blood the plasmodiun multiplies at an enormously rapid rate, and it is during this process of multiplication that the symptoms of malaria show themselves, their severity apparently depending on the species or number of the parasites.

547. These symptoms are well known. There is first the cold stage, with headache and shivering fits. Then comes the second or hot stage, which appears about an hour or two after the commencement of the first stage, and lasts about three or four hours. This is succeeded by the third, or sweating stage, which goes on for another two or three hours. After that, the patient feels quite well until the next attack which may come on the following day when the malaria is called quotidian, or on the following day but one when the term tertian fever is used, or on the following day but two when we speak of quartan fever.

As the temperature subsides and the other symptoms of feverishness disappear in the intervals between the attacks, we speak generally of malaria as remittent or intermittent fever, the former being the name for the severer cases in which the temperature falls, but does not reach the normal.

In some countries the attacks remain more or less continuous, the disease assuming the forms known as æstivo-autumnal fever or malignant malaria. The patients of this class suffer from a combination of consequences, including dizziness, indiges-

tion, pains in the joints and muscles, etc. They usually have a bad complexion, an enlarged and painful spleen—known as ague-cake—and also an enlarged liver.

One speaks of this condition as malarial cachexia or malarial anæmia.

548. Malaria is prevalent in moist tropical countries and in low marshy districts where gnats and mosquitoes abound.

In England, malaria is chiefly met with on the borders of the Thames in Kent and Essex, and the fens of Cambridgeshire and Lincolnshire; on the Continent of Europe in Holland, North Germany, and Italy; it is prevalent on the West Coast of Africa, in many parts of India, in China and Persia, and in Central America. The shores of the Mediterranean are considered the most malarial region in the world.

Malaria has lost much of its former dread since it is now possible, by draining the marshy areas where mosquitoes are in evidence and malarial parasites abound, to reduce the danger of infection considerably. The prevention of mosquito bites by the provision of suitable nets is also a very valuable factor in the fight against malaria. As to remedies, quinine is and remains the only efficient anti-malarial drug. It is used both for curative and preventive purposes, in 5 or 10-grain doses, and in quantities up to 30 grains daily. In malarial districts it may be taken in large doses—up to 10 grains daily—to ward off attacks.

549. Many sufferers from malaria are subject to a peculiar neuralgia of the nerves over the eyebrows—supra orbital neuralgia, or brow-ague—which occurs either along with or in the place of paroxysms of malaria, and which as a rule yields to the internal administration of quinine and iron tonics.

Where quinine cannot be taken or if it does not achieve the desired result arsenic is sometimes an effective remedy, or Warburg's tincture may be tried in doses of from one to four teaspoonfuls three times daily.

It should be remembered that quinine is apt to produce singing in the ear and other symptoms described under the heading "Cinchonism."

After a severe attack of malaria quinine should be taken for at least three months—in gradually diminishing doses, even in the presence of slight degrees of cinchonism. Sometimes it is better to take it just before meals.

Removal to a malaria-free locality should be effected at all stages of the disease, but most especially in the case of those who are in a state of cachexia. Sea voyages are an excellent change.

Certain watering places such as Bath in England and Carlsbad in Bohemia have a reputation for their good effects in convalescents or chronic sufferers from malaria.

Malaria is also known by a large number of other names, including marsh-fever, jungle-fever, paludism, periodic fever, paroxysmal fever, etc. The form of malaria known as "Blackwater fever" is discussed under its own heading.

Malignancy and Malignant **550**

These terms are used in connection with illnesses or tumours which endanger the life of the sufferer by a process of gradual destruction. We speak of a malignant tumour principally when it is one of cancer or likely to give rise to secondary tumours of the same kind in other parts of the body. Malignant pustule is another name for anthrax, a disease which is nearly always fatal. Severe forms of

such diseases as typhoid fever, smallpox, and cholera, which present very grave symptoms and generally lead to death are also often classified among malignant illnesses.

Malingering **551**

We have heard a great deal of malingering and malingerers of recent years, particularly since the system of National Health Insurance has come into existence, and though there unquestionably are individuals who feign disease or deliberately protract an illness in order to claim monetary compensation or payments to which they have no right, it cannot be said that every person who is not so seriously ill as he or she thinks is a conscious malingerer. A good many become malingerers—or perhaps it is preferable to call them hypochondriacs or valetudinarians—quite unconsciously, partly because they exaggerate their symptoms in all good faith, and partly because they receive from their friends an undue amount of sympathy.

The subject is one of considerable difficulty, requiring sometimes the skill and experience of the most authoritative specialists to decide whether a particular case is one of malingering or not, and it now and then happens that even they are deceived or mistaken. Some cases on the other hand are detected with the slightest ease, and to the complete discomfiture of the malingerer by a simple test or two, and just as new methods of warfare are counteracted by new methods of defence so the medical profession is gradually accumulating a system of tests for the detection of malingering. But the real sufferer has nothing to fear, for it is a natural tendency in every doctor to err on the safe side and when in doubt to give the benefit of it to the patient rather than to the person or company who has to meet the claim.

Malta or Mediterranean Fever **552**

This is an endemic disease occurring on the coasts of the Mediterranean, but seen occasionally in other places as well, which is characterised by long attacks of feverishness with frequent relapses and accompanied by painful rheumatic complications in the joints and muscles. The cause of it is a microbe known by the name of micrococcus melitensis which is apparently transferred through the milk of the goat. At any rate, recent reports show that since goat's milk has been prohibited in Malta there has been a remarkable decrease in the disease among the population.

The treatment of Malta fever is by rest in bed, a liquid diet and reduction of the temperature by the usual means adopted in enteric fever, there being a great similarity between the two diseases.

Convalescence is hastened by a change of climate.

The form of fever noticed in the same localities, especially during the late war, and spoken of as "Sandfly fever" is due to a different microbe transmitted by the bite of minute sandflies. It lasts three days, hence the name "Three Days Fever," and is hardly ever fatal.

Mange **553**

Though this is a disease which affects in the first place only horses, cattle, and dogs, several cases have been reported recently of human beings having become infected through contact with domestic animals. The affection is of course a parasitic one, the parasite being of the same species

as that which gives rise to scabies (the itch) so that the treatment to be adopted is the same as in the latter disease.

Mania **554**

A form of insanity in which there is great mental and emotional excitement accompanied by hallucinations, delusions, and a tendency to violence towards oneself and others. Delirium tremens is a phase of alcoholic mania. Puerperal mania occasionally occurs after child-birth. Religious mania is a well-known manifestation of insanity of which the outlook is as a rule peculiarly unfavourable. (*See* "Insanity.")

Marasmus **555**

By the name "marasmus" we distinguish those cases of general wasting, especially in children, which are not the outcome of some constitutional disease, like tuberculosis or syphilis, but merely the result of improper or insufficient feeding, unhygienic conditions, neglect or similar causes. There is extreme emaciation, but no evidence of actual organic disease, the child has the appearance of an old person, and unless the mischief is quickly arrested, the tendency is towards a rapid fatal termination.

It is obvious what the treatment of such cases must be. Good food, fresh air, cleanliness, and proper clothing form the first essentials. Tonics necessarily take a secondary place. (*See* "Atrophy.")

Massage **556**

Massage consists of a systematic rubbing, kneading, or stroking of the superficial part of the body, either by the hands of the operator or with the aid of some instrument, for the purpose of promoting circulation, stimulating nutrition, restoring any lost power of movement or breaking-up adhesions resulting from disease or injury.

A knowledge of anatomy—at any rate of that of the muscles—is very helpful if massage is to be carried out systematically and not by haphazard.

There are a number of technical terms used in connection with massage. They denote the various processes employed, such as pressing, pinching, tapping, poking, chopping—included under the designation "tapotement." "Effleurage" means stroking, "pétrissage" rolling and kneading, and so on.

Vibratory massage is done either with the hand very rapidly or with some vibratory apparatus.

It would mean enumerating a long list of diseases if I were to name all in which massage is employed with more or less success. But I may perhaps mention lumbago, paralysis, locomotor ataxy, neuralgia, rheumatic affections and constipation as being those in which it offers the most favourable chances—apart from conditions which follow upon fractures and other accidental injuries.

Measles **557—559**

The symptoms of measles which is an infectious, highly-contagious disease are at first those of a feverish cold—running from the eyes and nose, sore throat, cough and general indisposition, with elevation of the temperature. About the fourth day, the eruption appears first on the face and shoulders and afterwards all over the body. This rash remains for from one to six days and then begins to disappear in the form of a slight desquamation or peeling.

The incubation period of measles—

that is, the interval between exposure to the infection and the appearance of the first signs of the illness—is from 10 to 14 days, and altogether the disease lasts about a fortnight.

The rule that the same person is not attacked more than once by measles is subject to very many exceptions, and the practice of some mothers to put the healthy children together with the one infected so that they may all go through the illness at the same time—"and have it done with"—is both unreliable and mischievous.

558. Measles is not a dangerous illness, but it is liable to be accompanied by dangerous complications or consequences—such as pneumonia, kidney disease, inflammation of the ears, etc. Hence the necessity of great care. Good nursing and attention to hygienic requirements, including a well-ventilated and darkened room, a liquid diet, and sufficient water to drink are of first importance. Medicines play only a second or third-rate part, but no child with measles should be without medical attendance, so that any complication arising may be dealt with immediately and effectively.

The following mixture against the cough and fever may under suitable circumstances, and in the absence of a medical attendant be given in doses of half to a teaspoonful every two or three hours; Potassium citrate 4drs., lemon juice 1oz., camphorated tincture of opium 1dr., syrup of ipecacuanha 2drs., syrup of tolu to make up 3ozs.

559. It may be of interest to mention that an early sign of measles frequently to be noticed before the appearance of the rash is the presence of dark purplish spots on the palate and the inside of the cheeks and lips —known as Koplik's spots.

The variety of measles known as German measles is discussed under a separate heading.

Under the name "fourth disease" some doctors describe a measles-like eruption which is not exactly like scarlet fever, measles or German measles.

Other names for measles are rubeola and morbilli. Measles does not require notification to the medical officer of health except under special circumstances, or in particular districts.

Melancholia **560**

A form of insanity of which the principal symptoms are an increasing depression of spirits, gloominess, and a desire to be left alone brooding over imaginary wrongs. The mental and physical faculties become steadily impaired, and there may be actual delusions. In the early stages, one should try a change of air and surroundings.

Memory, Loss of **561**

Loss of memory or amnesia may be general or partial, permanent or temporary. It may be the result of actual organic disease of the brain or a purely functional disturbance. In the latter case, it is usually due to some severe mental shock in an individual with a tendency to neurasthenia or hysteria, and recovery takes place, as a rule, though relapses are frequent. The more serious forms of loss of memory come under the category of brain affections of which aphasia is the representative type. (*See* "Aphasia.")

Menière's Disease **562**

This is a curious affection—known also as aural or labyrinthic vertigo—of which the characteristic symptoms

are excessive giddiness, momentary loss of consciousness, loud noises in the ears, and a tendency to sickness and vomiting. The cause is supposed to lie in some defect in the internal mechanism of the ear. The treatment consists in the administration of bromides and salicylates or the application of counter-irritants, such as mustard poultices, tincture of iodine, etc., over the bone behind the ear. Other remedies include the application of the electric current, dilatation of the Eustachian tubes, correction of defective eyesight, etc. (*See also under* "Ears, Diseases of," and "Giddiness.")

Meningitis **563**

I have dealt with this serious disease under the heading "Brain, Diseases of the," and the form known as "cerebro-spinal meningitis," or "spotted fever," will be found discussed under the first of these two names.

Chronic meningitis is generally a part symptom of syphilis or tuberculosis, or it may be present in association with other manifestations of brain disease, like general paralysis of the insane. The most prominent signs of it are headache, convulsions, and stiffness in the neck muscles. If the spinal meninges (covering membranes of the spinal cord) are involved, there are also present pains all over the body, increased reflexes and various paralyses.

The treatment is most unsatisfactory, the illness ending almost always fatally. Where it is attempted, it is directed towards the original cause.

Mercurialism **564—565**

Mercurialism or chronic mercurial poisoning is seen in men engaged in quicksilver mines or in those who work with mercury in some form or other, such as mirror-makers, etc. It may also be brought about by large doses of mercury taken internally for curative purposes during long periods at a stretch.

The characteristic feature of mercurialism are the "mercurial tremors" or "trembles," which affect the arms first, afterwards the legs and then the rest of the body. Other symptoms are inflammation of the mouth, loosening of the teeth, and excessive salivation. The treatment consists in removal from the influence of the poison.

For the relief of the spongy gums and inflammation of the mouth, antiseptic and astringent remedies are available in the form of mouthwashes or lozenges. Potassium chlorate is largely used for the purpose in the strength of one or two per cent. as a mouthwash or gargle, and also as lozenges or pastilles.

565. Acute mercurial poisoning occurs occasionally through an accident. The principal symptoms are pain in the stomach, vomiting, and purging, followed by general collapse. The best antidote is white of egg mixed with milk or water. This should be given freely before the stomach is emptied by the stomach pump or by an emetic.

Metric System **566**

As readers of this book may have occasion to purchase drugs or have prescriptions made up in countries where the metric system is in use, I give here the most important weights and measures of that system together with their equivalents in grains, ounces, etc., and *vice-versa*.

One gram (or gramme) in weight	is	equal to	15·43316 (or roughly 15½) grains
One milligram (0·001)	,,	,,	0·015 (or roughly 1/70th) of a grain
One centigram (0·01)	,,	,,	0·15 (or roughly 1/7th) of a grain
One decigram (0·1)	,,	,,	1·54 (or roughly 1½) grains
One kilogram (1,000 grams)	,,	,,	2·204737 lb. (or roughly 35¼ oz.)
One grain	,,	,,	0·06 gramme
Five grains	,,	,,	0·32 ,,
Ten grains	,,	,,	0·64 ,,
Fifteen grains	,,	,,	0·97 ,, (roughly one gramme)
Twenty grains	,,	,,	1·29 ,,
Sixty grains (one drachm)	,,	,,	3·88 grammes (roughly 4 grms.)
480 grains (one ounce)	,,	,,	28·35 ,, (roughly 30 grms.)
5,760 grains (one pound)	,,	,,	453·59 ,, (roughly half a kilo)
One millimeter (0·001 in length)		,,	1/25th of an inch
One centimeter (0·01)	,,	,,	2/5ths ,,
One meter (1·0m.)	,,	,,	39·37 inches
One inch	,,	,,	2½ centimeters
One cubic centimeter (1c.c.) capacity		,,	17 minims (roughly)
One litre (1 L.)	,,	,,	35 fluid ounces (roughly)
One fluid ounce	,,	,,	30 cubic centimetres (roughly)
One pint	,,	,,	568 ,, ,,
One gallon	,,	,,	4½ litres (roughly)
Half an ounce (one tablespoonful)	,,	,,	15 cubic centimetres (roughly)
One fluid drachm (one teaspoonful)	,,	,,	3·75 ,, ,,
One minim (or drop)	,,	,,	0·06 ,, ,,
Thirty minims (half a teaspoonful)	,,	,,	2 ,, ,,

Cubic centimeters are also called fluid grammes.

Midwives' Act **567**

Since April 1st, 1910, it is an offence for any woman, not a legally qualified medical practitioner, if not certified under the Act, to attend women in childbirth habitually and for gain, except under the direction of a medical practitioner, unless in case of emergency, under a penalty not exceeding ten pounds. In most large towns arrangements are now in existence which enable every woman in childbirth to have medical attendance at the expense of the ratepayers, if she is in poor circumstances, and the midwife in attendance thinks such attendance necessary. In cases of difficulty midwives are obliged to call in medical aid.

Migraine **568—571**

Migraine, which is also known by various other names, like megrim, sick headache, bilious headache, blind headache, etc., is a disease which consists of paroxysmal attacks of severe pain, as a rule in one side of the head only—hence the term "migraine," a derivation from "hemicrania," which means pain in one half of the head.

The causes of migraine are many. In the majority of cases there is a sort of nervous predisposition to it, and this is supplemented by such additional influences as eye-strain through defective eyesight, disorders in the stomach and bowels including constipation and flatulence, mental excitement or anxiety, an irregular mode of life in

other directions, an ill-ventilated room, insufficient sleep, etc.

569. Migraine is more frequent in women than in men, and seldom begins after the age of thirty or thirty-five. An attack of indigestion or some unusual mental over-exertion may easily commence it. The first signs are in most cases a sensation of half-blindness or peculiar visual manifestations with intolerance of light and sound. Or there are other nervous disturbances, such as tingling in various parts, inability to concentrate the mind, the brain feeling exhausted and incapable of grasping ideas. Then the headaches appear, and they are the most distressing of the symptoms. They generally last until sickness and vomiting bring some relief.

The attacks occur at intervals varying from a few days to several months, and the disease may last a whole lifetime.

570. During an attack, the best treatment consists of rest in bed in a darkened room and cold compresses to the head. Antipyrin in 5 or 10-grain doses is often of considerable benefit. The so-called "menthol pencils" applied locally to the affected parts are also of some value occasionally, and a large number of patients derive relief from a 5 or 10-grain dose of aspirin or one of its substitutes.

Recently the method of treating migraine by setons has been revived. It means drawing with a needle a thread or skein of threads through a fold of the skin at the back of the neck and leaving it there for a few hours or days, under antiseptic precautions.

571. Between the attacks the cause of the migraine should be sought and removed. The diet should be regulated, the bowels attended to, and all possible precautions in the directions referred to above must be taken. The general health is to be supported by tonics and suitable exercises, and in the cases due to functional nervous disorders, potassium bromide in 5 or 10-grain doses two or three times daily promises good results. (*See also under* "Headache.")

Miliaria **572**

Miliaria or prickly heat is an acute inflammation of the sweat glands resulting in the formation of small seed-like vesicles all over the skin which occasion a pricking or tingling sensation. It occurs mostly in the summer through excessive perspiration, and generally ends with some peeling of the skin. It is apt to recur over and over again. The application of a lotion of bicarbonate of soda—a teaspoonful to the pint of lukewarm water—is in many cases sufficient to arrest the complaint. In others a lotion of carbolic acid, half to one per cent. strong, or one of liquor carbonis detergens—a teaspoonful to the pint, well shaken—answers the purpose better. Some persons are subject to this complaint whenever they wear flannels or woollen underclothing, in which case they must make the necessary change to open-meshed cotton or silk garments. This may happen only when the underclothing is new, so that it should not be worn before having been washed once or twice. Anointing the skin every morning with fat or oil acts in many cases as an excellent preventive.

Molluscum Contagiosum and Fibrosum 573—574

The first is a disease of the skin consisting of a number of small rounded swellings which hang from a pedicle or are level with the surface,

and are either whitish or pink in colour. It does not occur very frequently, and when it does, the face is the part which is mostly affected. It is not quite certain whether the disease is parasitic or not, though there is sufficient evidence to suggest that it is contagious. The swellings often disappear without any treatment. Where the latter is necessary, it consists of incision and evacuation of the jelly-like contents. Or they may be removed in their entirety. Where this cannot be done electrolysis forms one alternative, and the application of flexile collodion containing from 2 to 10 per cent. salicylic acid another.

574. The form of cutaneous tumours known as molluscum fibrosum is not contagious. The swellings are very numerous and attain large dimensions. They mostly hang from elongated pedicles all over the body and may give the sufferer a most abnormal appearance. Sometimes the disease dates from infancy, having been congenital and progressed gradually. No preventive treatment is available, and when the tumours are developed the only method of removing them is by the surgeon's knife. But where their number is large it is usually best to leave them alone, with the exception of those which owing to their position may become a source of danger through injury of some kind.

Monomania 575

This term is not much used now except to designate partial insanity of a mild character. Some writers define it as insanity without delusions and others as insanity on some particular subject. This kind of insanity gives rise to many controversial disputes in both civil and criminal courts, and demands much skill and experience for its proper appreciation or understanding.

Monstrosities 576

A term generally used to designate congenitally abnormal individuals who do not long survive their birth. There are, however, monstrosities who remain alive for many years, as for instance, the Siamese twins, and similar curiosities. Milder degrees of monstrosities go by the name of malformations. Of these there is a large variety, almost any part of the body being subject to abnormal or imperfect development.

Morphinomania (Morphia Habit) 577—578

The remarks made under the heading "Drug-habit" apply particularly to the addiction to opium and its chief derivative, morphia; I will here add a few observations.

In some people no ill-effects of the habit show themselves until very long afterwards, in others they appear almost immediately. The first signs are a sallow complexion, a peculiar premature aged expression, pinched features, and a bent figure. The pupils are generally contracted, though in the stage when the craving is experienced they are dilated or unequal and the look is quite wild, as if in a dreaming condition. The voice is husky, the hair becomes grey. The mental activity after a dose is increased or even brilliant, but between does it is impaired and there is also more or less loss of memory. Insomnia is a fairly constant symptom, and among others may be mentioned constipation, various neuralgias, moral depravity, hallucinations, etc., etc.

578. There are two methods of treating the morphia habit as such apart from the consequences which it

produces. One is rapid and immediate withdrawal of the drug, the other by a slow and gradual process. Each has its advantages and drawbacks so that each case must be treated on its merits. But whichever method is adopted precautions must be taken against a surreptitious supply of the drug, and for this reason treatment undertaken at the patient's residence is as a rule quite useless. A morphinist's promise of abstention has not the slightest value.

Mosquito-Bites 579

In addition to the general remarks to be found under the heading "Bites and Stings," the following few observations on mosquito-bites will prove useful to those interested in the subject.

The first measure to be taken against the spread of mosquitoes is through drainage and levelling of their breeding places, which should also be covered with kerosene. Rooms and clothing should be disinfected, especially with sulphurous acid. Provision of suitable nets is the next consideration. Oil of lavender and pennyroyal will keep mosquitoes off. In India the following combination is largely used as a protective inunction remedy against mosquitoes: Oil of bergamot, oil of cloves and oil of lavender, ½oz. of each; oil of turpentine 2oz.; quinine sulphate 20 grains; Rectified spirit 8oz.; water to 1 pint.

The irritation from mosquito bites may be relieved by the gentle application of some ammonia. Friction is injurious rather than useful.

Mountain Sickness 580

This comprises a combination of symptoms, resulting from ascending mountains of considerable height, the most prominent of which are shortness of breath, lassitude, headache and palpitation, sickness and vomiting supervening in but a few cases. Some aviators also complain of similar attacks, especially on their first trips. Unless the stay at the high altitude is necessarily of long duration, treatment is seldom required. Where this is the case, it consists of rest with the head low, maintenance of the body, warmth, and easily digestible articles of food. Oxygen inhalations are of great service, if a supply can be obtained or arrangements made accordingly.

Mouth, Diseases of 581—588

Stomatitis—or inflammation of the mouth—is one of the most frequent illnesses, and it may be due to several causes, including parasites—this being the case in the condition known as "thrush" (*which see*), often present in delicate infants—mechanical irritation from a jagged tooth or tooth-plate, chemical irritation, burns or scalds, tobacco-smoking, etc. Some general diseases, like syphilis and scurvy, have inflammation of the mouth as one of their symptoms.

For the treatment of stomatitis a gargle or mouth-wash of potassium chlorate—of about 2 per cent. strength—is generally the best remedy. Sometimes a lotion of boracic acid is sufficient, and in other cases one must have recourse to strong antiseptics, like carbolic acid—half or one per cent. strength—or perchloride of mercury—one in two thousand. Change of air is most desirable and, of course, the cause must be looked for and removed. All further irritation must be avoided, and food and drink should be taken cool rather than hot.

581a. In severe cases of stomatitis the gums become inflamed (gingivitis),

spongy and painful with a tendency to bleed. This is very marked in lead-poisoning, and scurvy. For the local condition a good mouth-wash and gargle is a mixture of tincture of myrrh one part, borax one part to twenty parts of eau de Cologne. Another is diluted glycerine of tannic acid.

582. All patients undergoing mercurial treatment should make frequent use of the above-mentioned potassium chlorate mouth-wash or suck potassium chlorate lozenges.

Most cases of stomatitis are accompanied by an intensely foul breath. Apart from treating the cause, these should be treated by the use of disinfectant mouth-washes, for instance, a 2 per cent. solution of lysoform or formaldehyde pastilles allowed to dissolve in the mouth.

583. Gumboil is another frequent diseased condition of the mouth. It is really a small abscess due, as a rule, to a decayed tooth. If hot fomentations fail to relieve it, an incision or the removal of the bad tooth must be resorted to.

584. One sees sometimes a bluish-white swelling in the floor of the mouth under the tongue. It is probably what is called a "ranula," or cystic tumour, and the treatment, if any is required, is purely surgical.

585. Other rarer diseases of the mouth are tumours and "salivary calculi." These latter are friable concretions consisting chiefly of phosphate of lime, of various sizes, coming from the glands in the neighbourhood of the mouth. Removal by the knife is the only rational treatment. The same remark applies to the salivary fistulæ resulting from accidental injuries to the salivary glands.

586. The condition known as noma or cancrum oris (water-canker) is a rare but severe form of stomatitis which leads to ulceration and gangrenous destruction of the tissues of the cheek. It occurs mostly in delicate children after an attack of some infectious feverish disease, such as scarlet fever, and, as a rule, ends fatally in from a few days to two or three weeks. If treatment is attempted, it is of a surgical nature.

587. Some people complain occasionally of more or less constantly of dryness of the mouth (Xerostomia). In most cases the trouble is of nervous origin, and sudden mental shock or fright accounts for acute occurrences of it. Sometimes it is the result of disease of the salivary glands which arrests their secretion of saliva, and it also forms one of the symptoms of diabetes, gastritis, and Bright's disease. Stoppage of the nostrils in nasal catarrh—acute or chronic—is generally accompanied by more or less dryness of the mouth. The treatment is largely causal. Where this is impracticable or difficult, frequent painting of the mucous membrane of the mouth with glycerine will give relief. A more heroic remedy, which should be adopted by cautious people under medical supervision only, is to allow occasionally a tablet of pilocarpine $\frac{1}{4}$-grain strong to dissolve slowly on the tongue or to hold in the mouth from time to time for a few minutes 5 minims of a 2 per cent. solution of the same drug—which, be it noted, however, is a strong poison.

For the opposite condition, namely, excessive secretion of saliva, *see under* "Salivation."

588. As to tumours forming in the mouth, it is plain that surgical removal is the only possible method of treatment. The term epulis is applied to nearly every variety of tumour pro-

ceeding from the gums, with the exception perhaps of cancer.

Mumps **589—591**

Mumps or parotitis is an acute infectious disease which consists principally of swelling of the parotid glands—the saliva-secreting structures situated in the cheek underneath and in front of the lobes of the ears. The swelling is generally on one side, occasionally on both.

Mumps is, as a rule, seen in young people, rarely in adults. The same person is seldom attacked twice. Very often the illness appears in an epidemic form.

The period of incubation is about fourteen days or longer. Hence the difficulty of arresting an epidemic, because people may be infected with mumps for a considerable time and attacking others without being aware that there is anything the matter with them.

590. The characteristic symptoms are pain and stiffness in the jaws and cheeks, and swellings under the lobules of the ears. Mastication and swallowing increase the pain. At the same time there is general feverishness. Rest and hot fomentations are generally sufficient treatment. The diet should be light and mostly liquid in order to reduce chewing and opening of the mouth to a minimum. If the pain is very severe, the swelling may be smeared over with some glycerine of belladonna and covered with a warm dressing. The bowels should be attended to with regularity and an aperient given where necessary.

591. Complications may arise besides those mentioned already, including deafness, inflammation of the joints, kidney troubles, etc., for which the treatment will be found described under the respective headings.

The convalescent stage needs support by appropriate tonics and good nourishment.

Muscles, Diseases of **592—595**

The muscles are subject to a number of diseases and injuries of which the most frequent are the various forms of painful muscular rheumatism (myalgia), including lumbago, stiff-neck, pleurodynia (pain of the intercostal muscles), rheumatism of the scalp, etc. In all these conditions, the pain is aggravated by movement or pressure.

The cause being frequently, if not always, an inflammation of the fibrous parts of the muscles, the names "fibrositis" and "myositis" are now commonly employed.

Hot applications are generally the best method of treatment in muscular rheumatism and the recent modifications including hot-air apparatus, radiant heat baths, etc., give almost immediate relief. Turkish baths and massage, or gentle rubbing with oil of wintergreen, are also valuable remedies. Internally benefit is generally obtained from salicylate of soda in 10 or 15-grain doses or from aspirin in similar doses. A favourite remedy with some doctors is ammoniated tincture of guaiacum in teaspoonful doses taken with milk.

593. Wasting of the muscles or muscular atrophy is a result of some diseases of the spinal cord or other parts of the nervous system or of some more or less obscure affection of the muscles themselves. Of the latter, idiopathic muscular atrophy (or dystrophy) is a characteristic disease often seen in members of the same family—denoting the presence of an

element of heredity. It usually occurs in boys before the age of eighteen, and leads to helplessness and different deformities through the weakness and wasting of various groups of muscles. Sometimes the muscles appear to become enlarged at first, hence the further name of pseudo-hypertrophic muscular paralysis. The disease is extremely chronic and may last for many years, treatment being practically useless. All that can be done is to prolong the life by good food, hygienic surroundings, massage, and electricity.

594. A similar form of muscular wasting with more or less paralysis is seen in older males between twenty-five and fifty years of age, and is spoken of as progressive muscular atrophy or wasting palsy. The cause of this affection lies in disease of the spinal cord. It generally begins with wasting of the small muscles between the fingers of the hands, giving the latter a clawlike appearance. The same obscurity exists as to the cause of this as of the other form, except that syphilis is said to be an important factor. The treatment is equally unsatisfactory, and the duration of the disease indefinite.

Muscular wasting is, of course, included in general atrophy due to neglect or malnutrition.

595. All muscles are liable to contractions through disease or injuries. Muscular fibres of particular muscles may rupture through sudden exertion or even a fit of laughter. Muscles may become dislocated and require reduction or replacement to their proper position. Rest in bed is necessary in the case of recent injuries to muscles, though splints, bandages or surgical measures may also have to be applied. In later stages massage and electricity are of much assistance. Passive movements will prevent the occurrence of contractions or of fixation with deformity. (*See also under* "Fibrillation.")

Mushroom-Poisoning **596**

Mild cases of mushroom poisoning come under the category of gastritis and require treatment as such. Severer ones resemble cholera in their effects and may lead to a rapid fatal termination. Cramps and muscular contractions are a bad sign. The stomach should be emptied as soon as possible, the patient should be wrapped in warm blankets and an aperient is to be given, followed if necessary by stimulants and hot drink.

Myxœdema **597**

This is rather an obscure disease the symptoms of which are a swollen face with the skin waxy-looking and pale, and the skin on the rest of the body thickened, dry and rough to the touch. There is almost complete absence of perspiration. The hands look like spades. The nervous functions are affected, and there is considerable impairment of the intelligence. The disease is seen mostly in elderly women.

The cause is supposed to lie in the loss of function or a degeneration of the thyroid gland—a small organ situated in the front of the neck—and the treatment consists now chiefly in the administration of extract from the thyroid glands of sheep. A convenient method of taking it is in the form of tablets in doses varying from 1-16th of a grain to 5 grains or more twice or three times daily. Care must be exercised as this drug causes sometimes disagreeable effects. (*See under* "Thyroid Gland.")

Nævus **598—599**

A nævus (plural nævi) is a mark or blemish on the surface of the skin, generally congenital, but not always so. Hence the name "Mother's mark." It is a collection of dilated small blood vessels forming an angioma or the so-called "port-wine stain." Some nævi remain stationary, others grow very rapidly. If a nævus becomes inflamed the inflammation often causes its disappearance. There are several methods of treating nævi, including electrolysis, the use of caustics or strong acids and removal by the surgeon's knife, but in most instances it is preferable to leave them alone.

599. The form of nævus pigmentosus or pigmentary mole may consist only of an abnormal collection of brown or black pigment or this may be accompanied by a small growth of skin covered or not with air. In rare cases the growth assumes larger proportions. Though treatment as outlined above is often attempted and sometimes with success, moles as a rule should not be interfered with, except when they cause marked deformity. (*See also under* "Birth-marks.")

Nails, Diseases of **600—605**

Apart from changes in the nails due to injuries or general illnesses, the nails are subject to inflammation (onychia) and suppuration which may lead to their complete loss. The inflammation generally begins in the bed of the nail—that is in the soft part under it.

One such inflammation is known under the name of "whitlow"—a painful affection caused as a rule by a scratch or injury and subsequent inoculation with septic matter. The treatment is like that of any other abscess. Whitlows often follow one another, one finger affecting its neighbour. This is seen as a rule in delicate and ill-fed young women.

601. The nails are subject to various deformities and alterations, such as brittleness, undue softness, discoloration, etc. The cause is usually a disturbance in the general health. Sometimes it lies in ill-fitting shoes, as already mentioned under the heading "Ingrowing Toe-nail."

Dry, britle, cracked and lustreless finger-nails may be treated in the following manner. The nails should be painted right to the base with a mixture consisting of one drachm each of glycerine of carbolic acid and glycerine of boracic acid to an ounce of water. This should be left on for five or ten minutes, when the nails should be wiped and polished well with a nail pad or some cotton wool dipped in starch powder.

602. The nails are sometimes affected with psoriasis or eczema like other parts of the body. Treatment internally with arsenic in the proper doses or by a course of Levico water will effect a gradual improvement.

603. The habit of nail biting may be combated in various ways. One is to paint the finger-ends with a bitter substance, like aloes or with ink. Another is to wear gloves or finger-stalls constantly. Still another is to cut the nails every morning or every other day as close to the flesh as possible.

604. If after an injury a nail turns black, this means that there has been some hæmorrhage underneath it. Where such hæmorrhage has been severe, the nail will probably come off entirely, but a new one usually grows in its place, and this takes about six months.

605. A painful swelling occurs

sometimes under the nail of the great toe so that it is raised in the centre. The swelling proceeds from the bony part of the toe and is called an exostosis. No other treatment than removal of the nail or of the whole phalanx of the toe can be of any use.

Nervous System, Diseases of 606—609

The nervous system consists of the brain, the spinal cord, and the nerves. Each of these parts is subject to a number of diseases, either individually or in conjunction with the others. Some nervous diseases are organic, being accompanied by marked changes in the structure of the nervous organs, others are called functional because there are no such marked organic changes, or at any rate none which can be ascertained easily. Locomotor ataxy is a familiar example of the former group, neurasthenia and hysteria of the latter. As diagnostic facilities increase, the number of functional diseases diminishes. (*See* "Diagnosis.")

607. In speaking of "nerves" in the anatomical sense we mean elongated cord-like structures which convey impulses from and to the brain and the varous parts of the organism. The sensation of pain, for instance, travels from the periphery to the centre—or in other words from the part affected to the brain, impulses of movement travel from the brain to the muscles and joints. We speak of sensory and motor nerves or afferent and efferent nerves. Like blood vessels the nerves divide and sub-divide into larger and smaller branches.

608. We use the term "neurosis" to denote a functional disturbance in the nervous system or a tendency to such disturbances, and we call "neurotic" the people so affected. By "nervousness" or "neurasthenia" we understand a complex of symptoms of a disordered function of the nervous system. The principal of these symptoms are sleeplessness, palpitation, want of appetite, indigestion, constipation, listlessness, absence of all energy, etc.

609. Whilst the term "neurasthenia" is used for the more severe cases of this class, that of "nervousness" is employed in the milder cases, and also when we wish to refer more to the temperament and irritability of the patient. One must not mix up nervousness with timidity or shyness, though these are generally part of a nervous disposition.

The subject of neurasthenia is discussed at greater detail in a separate chapter, and the various nervous diseases will be found described under their own headings. See, for instance, under "Brain, Diseases of," "Apoplexy," "Chorea," "Locomotor Ataxy," "Neuralgia," etc. (Consult Index.)

Neuralgia and Neuritis 610—613

The term neuralgia signifies a severe paroxysmal pain along the course of a nerve or in the region supplied by it. There may or may not be other symptoms present, and these include a burning sensation, numbness, and more or less general ill-health of a depressing character. A distinguishing feature of neuralgic pain is that it diminishes somewhat on pressure of the affected part.

In many cases, neuralgia is a purely functional disorder not unlike neurasthenia, in others, it is the result of some local disease, as, for instance, in toothache. Neuralgia may also accompany a number of general or constitutional illnesses, like anæmia, infectious fevers, metallic poisoning,

chronic alcoholism, gout, diabetes, rheumatism, etc.

611. There are various designations of neuralgia according to the locality affected. The principal are: neuralgia of the face or tic douloureux; (face ague); intercostal neuralgia or neuralgia between the ribs; sciatica or neuralgia of the thigh and leg; gastralgia or neuralgia of the stomach, etc.

612. In practice the terms neuralgia and neuritis are often used indiscriminately, but the latter should be confined to the cases in which the nerve structure is inflamed as well as painful, this being evidenced by more or less marked signs of paralysis or at least muscular weakness in the affected region. Neuritis generally results from an injury or compression of the nerve,* from cold or damp (rheumatic neuritis), or it may form one of the symptoms of syphilis or lead poisoning.

The treatment of neuralgia and neuritis is directed first to the alleviation of the paroxysmal attacks of pain, and secondly to the cause which produces them. For the former, there exists quite a host of remedies and almost every doctor has his favourite method. Some prefer hot fomentations sprinkled with laudanum or belladonna liniment. Others apply cold bandages, and whilst personally I have seen more beneficial results from the former, I cannot deny the value of the latter especially in persons of plethoric disposition. In many of the milder cases relief is obtained by rubbing the painful part with a cone of menthol or with a little A.B.C. liniment. Severer attacks benefit from the application of a mustard plaster or the electric current. In fact, all the measures employed against backache and lumbago and mentioned under that heading are applicable against neuralgia. These local measures may usefully be supplemented by the internal administration of pain-killing drugs, for instance exalgin in doses of 2 or 3 grains, phenecetin in 5 or 10-grain doses, helico and antipyrine in similar doses, quinine in 2 or 3-grain doses, opium tincture, morphia, and a number of others.

In cases of neuritis the treatment is practically the same though the doses may have to be increased, but more attention must be devoted to finding out the cause of the attacks. Full doses of potassium iodide, say 10 grains three times daily after food, or salicylate of soda in similar doses, may be tried. They often bring great relief.

613. Where none of these remedies turn out satisfactory in very obstinate cases, it frequently becomes necessary to have recourse to hypodermic injections of morphia or to the surgical operation known as nerve-stretching, or to the excision of whole portions of the affected nerve. (*See also under* "Neuritis, Mutiple.")

Neurasthenia 614—619

By the term neurasthenia we understand a condition of nervous prostration or exhaustion which shows itself in a variety of ways. The sufferers complain of headaches, particularly at the top, backache, constant tiredness, muscular weakness, want of energy, mental irritability, loss of memory, peculiarities of conduct, inability to concentrate the thoughts or to sustain a mental effort, sleeplessness, feelings

* It has recently been suggested that the custom of wearing bracelet-watches is responsible for many cases of neuritis in the arm.

of fear or anxiety like that known as agoraphobia, disturbances of the eyesight, sensations of cold and heat in various parts of the body, palpitation of the heart, gastric disturbances from mere loss of appetite to indigestion of the form known as nervous dyspepsia, constipation; in fact, there is hardly a symptom of disease which may not be experienced subjectively by neurasthenic individuals, whilst organically—or as doctors call it, objectively, there is very little, if any, departure from the normal state of things. For this reason neurasthenia is regarded as the functional disease, *par excellence*. The poet Hood has well described it in the following lines:

> There's Morbid, all bile, and verjuice and nerves,
> Where other people would make preserves,
> He turns his fruit into pickles;
> Jealous, envious, and fretful by day,
> At night, to his own sharp fancies a prey,
> He lies like a hedgehog rolled up the wrong way,
> Tormenting himself with his prickles.

615. The causes of neurasthenia are principally mental and nervous strain. The perpetual worry which modern life with its vastly increased demands, financial, economic, and social brings in its train, no doubt accounts for the vast majority of the immense number of cases of neurasthenia one meets with nowadays.

Of other causes I may mention, physical over-exertion, excitement and fear, shock through sudden fright, accidental injuries and acute illnesses. Generally there is a combination of circumstances favouring the development of neurasthenia, among which a nervous temperament, an inherited tendency to disease of the nervous system, or to insanity, are the most effective. Sometimes neurasthenia is hardly more than unconscious malingering. We have ample evidence of this in the rapid restoration to health of neurasthenic patients immediately after the settlement of compensation claims over which they have had a dispute or litigation, although the symptoms from which they suffered may have lasted many months or years (traumatic neurasthenia).

616. From what I have said it follows that the treatment of neurasthenia is mainly intended to influence beneficially the mind of the patient in the first instance and his body indirectly. Hence the importance of rest, physical and mental, which must be absolute. All worry, business or private troubles, and anything that will cause excitement or anxiety, must be kept from the sufferer. He must be reasoned with and made to understand that his organs are sound, and his life not in danger, nor his health permanently injured. He must be encouraged to "pull himself together," to exercise control over his emotions and sensations, he must be taught to endure pain and inconvenience, and to conquer them by sheer will-power. He must learn that his troubles are insignificant when compared to those of sufferers from serious organic diseases who have not even the consolation of knowing that they may look forward to recovery.

This "moral" treatment is usefully supported by the employment of remedies calculated to employment of physical condition. Some patients derive more good from warm baths, others from cold packs and douches. Massage is decidedly beneficial and so is electric treatment applied in different ways. Tonics, like the hypophosphites, or quinine and iron, stimulate the appetite and improve the diminished vitality. The diet must be plain but wholesome and generous,

and of a nature compatible with the patient's diminished digestive power. Any symptoms, such as constipation or sleeplessness will be treated by the appropriate remedies, should they be necessary, the principle always being observed that the fewer drugs are taken, the better.

617. Not all cases of neurasthenia are alike. Some are so severe as to cause the patient to be quite helpless and bed-ridden. This is for instance the case in the form of neurasthenia known as myasthenia gravis—or muscular neurasthenia with complete exhaustion. In others the symptoms are more of the mental sort described above, so that one speaks of cerebral neurasthenia—or neurasthenia of the brain (Psychasthenia).

Each case must therefore be treated on its merits. But where the symptoms are more than moderately acute the necessary rest and nursing can hardly be obtained in the average household, and so it often becomes necessary to place the patient in some suitable nursing home or other institution.

618. The so-called Weir-Mitchell treatment of neurasthenia or "rest-cure," is nothing but the systematic application of the essentials contained in the above recommendations and for the reasons stated it is preferable or even imperative that it should be carried out away from the patient's home and the influence of his friends.

Various special "cures" for neurasthenia come into vogue now and then only to give place to others. By their novelty and perhaps eccentricity, they are meant to impress the patient to such an extent as to effect a moral alteration of his condition, and sometimes success is achieved. I may mention, for instance, the treatment by injections of sea water into the skin or direct into the venous circulation, the use of most elaborate and complicated electric apparatus, hypodermic injections of gland (and other animal) extracts, hypnotism, etc.

618a. The cases of neurasthenia known as "shell-shock" during and after the great European war, 1914-1918, and of which the symptoms varied in intensity from complete functional paralysis (*see* "Hysteria") to all kinds of mental disturbances benefited mostly from psycho-therapy (*see under* "Hypnotism") as practised in the neurological hospitals established by the military authorities. This method of treatment has since been adopted by the medical profession for use in suitable functional diseases, and valuable results are obtained, notably by those who practise it as a speciality. Among the conditions thus treated may be named functional loss of voice (aphonia or mutism), functional deafness, functional blindness, functional pains, loss of memory, spasms and paralysis, and the symptoms of neurasthenia generally.

619. As to the neurasthenics whose physical health is good, and who are perhaps more aptly described as hypochondriacs, nothing is of greater value than hard manual work or distraction accompanied by much fatigue and a complete change of surroundings such as can be obtained from travelling to distant and unfamiliar places. Naturally, where the cause of the neurasthenia is known or suspected, no treatment whatever will be of any service unless such cause is removed.

The single symptoms of the combination known as neurasthenia may as necessity arises be treated according to the directions given under their respective headings.

Neuritis, Multiple **620**

This form of neuritis—known also as peripheral neuritis—is characterised by the affection of several nerves at the same time, so that the pain is experienced in many different places, and not only in one area as in ordinary neuritis (*see* "Neuralgia"). Or the pain may appear successively in such different regions. The other prominent symptoms of multiple neuritis are loss of muscular power, resembling locomotor ataxy, wasting of muscles, and more or less mental impairment.

The most frequent cause of multiple neuritis is chronic over-indulgence in intoxicants. In these alcoholic subjects, the disease appears first, as a rule, in the form of tingling and numbness in the calves. Then follow more or less violent cramps and an extreme sensitiveness to touch. Pressure on the skin causes most excruciating pain, only curiously enough not immediately but after an interval of a few seconds at least. After that come the various manifestations of paralysis and wasting, as mentioned already. The outlook in these cases is not favourable.

Other causes of multiple neuritis are: chronic arsenical poisoning—which, in addition to the symptoms named, shows itsef also in the form of a rash on the skin; chronic lead poisoning, of which the wrist-drop through paralysis of the arm is the most characteristic feature; malaria, rheumatism, influenza, diphtheria, typhoid fever, etc.

The treatment of multiple neuritis is largely by removal of the cause producing it. For the relief of the acute symptoms the same remedies may be applied as mentioned under neuralgia and neuritis. After reaching the stage of convalescence, good nourishment, rest and tonics with massage and electricity, may be relied upon to effect a complete cure. The sooner the treatment is commenced the better.

Night-Blindness **621**

Night-blindness or hemeralopia is a condition of the eyesight which shows itself by an impairment of it only when the light is dim or in the night-time. It arises either from a degeneration of the pigmentation of the retina or from a state of general malnutrition. In a number of cases, the affection is either congenital or hereditary or both. It is said to be frequent among the poor in countries where strict religious fasts are observed. Some improvement may be obtained from wearing tinted eyeglasses. The general health must, of course, be attended to.

The reversed condition—day-blindness or nyctalopia—is much rarer. The persons affected see better at night than in the daytime. What has been said with regard to one anomaly applies equally to the other. (*See under* "Eyes, Diseases of," "Vision, Disorders of." etc.)

Nightmare and Night-Terrors **622—623**

The former term is employed when speaking of distressing dreams in adults which are characterised by a sense of suffocation or oppression. They are generally caused by a heavy meal just previously to going to bed or by mental exhaustion or excitement. As a preventive, only light meals should be taken in the early part of the evening and a tablespoonful of camphor water on retiring. Or a 10-grain dose of potassium bromide

dissolved in warm water. (*See also under* "Sleep, Disorders of.")

623. The night-terrors (pavor nocturnus) of children, which cause them to wake up in the middle of the night with screams of fear and other signs of distress, such as a contorted face and an outbreak of perspiration, or to cry out without actually waking, occur mostly in those of a lively and excitable disposition, or in the offspring of neurotic parents. The actual cause of the occurrences may lie in indigestion through a late meal, the presence of worms, or adenoids, the habit of covering up the face with the bedclothes, delayed dentition, etc. Often the cause lies in the stupid punishment of children by putting them in a dark room or in ghost stories or in cramming and overwork. Though very alarming, the attacks which do not last more than a few minutes are seldom dangerous and often the children do not even remember anything the following day. Nevertheless the cause of the trouble is to be sought, and it is, as a rule, not difficult to find it. A good plan is not to let such children sleep by themselves or in the dark. If necessary a 2 or 3-grain dose of potassium bromide may be given at night-time, but on the discovery and removal of the cause no drugs or other remedies are needed.

Night-Sweats 624

Profuse perspiration in the night is a common symptom of consumption as well as of other wasting diseases. It is not advisable to treat night-sweats without reference to the disease which produces them, but sometimes this becomes a necessity. In that case one may try sponging with weak vinegar or eau de Cologne, or with plain tepid water, Tincture of belladonna in doses from 5 to 15 minims is a drug which is often prescribed against excessive perspiration, but being a poison it should only be taken by doctor's orders.

Children subject to rickets generally perspire much about the head so that their pillows are often wet through and through.

Nose-Bleeding (Epistaxis) 625—627

Bleeding from the nose may occur without any apparent cause or it may be the result of an injury. Certain chronic conditions favour the frequent occurrence of nose-bleeding, and among them may be mentioned hæmophilia, nasal polypi, scurvy, valvular disease of the heart, disease of the lungs, liver, or kidneys, pregnancy, full-bloodedness accompanied by high blood pressure, etc. It should be understood that unless the nose-bleeding assumes dangerous proportions the hæmorrhage is frequently Nature's endeavour to prevent a fatal complication of these conditions, such as an attack of apoplexy or heart failure. In that event, it should not be arrested too soon. This applies particularly to the cases in which the nose-bleeding has come on after severe mental emotion, after excitement, anger, or unusual exertion.

626. Where the hæmorrhage, however, is excessive, simple measures may be adopted to stop it. The patient should sit or half-lie down quietly with the head hanging, and the face should be sponged with cold water or if ice is available some of it wrapped in a handkerchief should be placed across the nose, on the neck, and on the forehead. Bandages dipped in a solution of vinegar and water may be applied in the same way. Some believe in the

application to the neck of a cold substance, such as a large key. If the bleeding continues, the nostrils should be douched with either hot or cold water containing salt, or lemon juice, or else plugged with cotton wool or lint. At the same time the hands and feet should be soaked in hot water. In obstinate cases it may become necessary to apply astringent substances, like tannic or gallic acid, alum, adrenalin chloride, etc., or the nasal cavity is plugged from behind the nose and through the mouth with the help of the instrument known as Bellocq's cannula or a catheter with a double string inside it. Naturally these latter measures can only be employed by a medical man or at least by someone who has had experience with them.

627. The following hint is certainly worth a trial, especially in the case of children: Vigorous motion of the jaws, obtained by chewing a piece of paper, will sometimes arrest very rapidly even severe nose-bleeding.

When the bleeding has been arrested, the patient should lie down for an hour or two. At any rate he must avoid exertion, he must not blow his nose, and he should take his food and drink cold, avoiding all stimulants.

Repetition of the attacks of nose-bleeding may be averted by the removal or amelioration of the above-mentioned chronic causes—where such a course is at all possible. Or the case will require treatment as indicated under the next heading.

Nose, Diseases of the **628—634**

Apart from the diseases of the nose and nasal cavities discussed under the headings Acne rosacea, Adenoids, Catarrh, Hay-fever, Nose-bleeding, etc., the nose is subject to other affections and injuries.

629. Ozæna is a form of chronic nasal catarrh accompanied by ulceration of the lining membrane of the nostrils (which may extend to the nasal bones) and an evil-smelling discharge from the nose. The treatment consists of thorough disinfection of the nostrils with antiseptics and insufflations of pure boracic acid or inhalations of creosote vapour, but very often stronger measures become necessary, including cauterisation and the removal by operation of diseased portions of bone.

630. Polypus of the nasal mucous membrane is a common affection similar in nature to adenoids. Such polypi may interfere with breathing, especially in damp weather, and also give rise to much loss of blood or to a discharge of pus. The best treatment is to remove them entirely, and the galvano-cautery is much used for the purpose.

631. Rhinorrhœa—or a water discharge from the nose occurring at longer or shorter intervals—is a not uncommon complaint in persons of a nervous temperament or in those who have suffered an injury to the head. It is as a rule devoid of danger, and may be relieved by the use of astringent nasal douches or sprays, such as one of alum, four grains dissolved in an ounce of water.

632. The septum of the nose—that is the dividing partition between the two nostrils—is subject to several abnormalities or diseases. It may be deflected more towards one side than the other, so as to leave one nostril unusually wide and the other almost completely stopped up. Or it may present ridges and crests causing more or less obstruction to the breathing. Where treatment becomes necessary, it is usual to employ the

galvano-cautery. Occasionally the whole of the septum has to be removed. The septum becomes sometimes inflamed, the inflammation may end in an abscess and the latter in perforation. The treatment will, of course, depend on the extent of the affection, and it belongs largely to the domain of the specialist. The condition known as "saddle-nose," in which the bridge of the nose is sunken in, may be due to an injury, adenoids, or imperfect development.

633. That foreign bodies frequently find their way into the nose where they become embedded so that it is difficult to dislodge them is well known to mothers of young children. Sometimes such a foreign body, for instance, a pea, bead, pebble, small marble, bit of wood, or an insect, may remain in the nose for a long time causing in the end a purulent discharge with a most offensive smell. There are special hook-like instruments for the removal of these articles if they cannot be reached with ordinary forceps.

634. There are a number of rarer conditions and diseases of the nose with which I cannot deal here as their explanation would mean entering into minute anatomical details. I may just mention that various operations are undertaken now to correct deformities about the nose by the subcutaneous injection of paraffin wax, and in other ways.

Since the method or rhinoscopy—or examination of the back of the nose by a small mirror similar to the one employed in laryngoscopy—has come into use the speciality of diseases of the nose has made very great progress.

Obesity **635—638**

By obesity we understand excessive corpulence through accumulation of fat in the tissues. The causes of obesity are partly a hereditary inclination and partly a too generous or unsuitable diet accompanied by insufficient physical exercise. Overindulgence in intoxicants, particularly beer, favours obesity, hence the frequency of the condition among beer-drinking nations, for instance, the Germans.

Apart from their external appearance, obesity shows itself by impairment of the physical activity, shortness of breath, palpitation, a weak and sometimes intermittent pulse, sleepiness, and other manifestations. Obese persons are liable to various complications, like diabetes, gall-stones, heart disease, apoplexy, gout, etc. Some forms of obesity give rise to pain of a neuralgic character over the places where the fat is most abundant (Adipositas dolorosa or Dercum's disease).

636. The treatment of obesity must be directed towards a reduction in the amount of food consumed and the oxidation of the fat already deposited. By a suitable diet alone one can achieve much. The famous Scottish physician, George Cheyne, reduced his weight from 32 stone to normal dimensions by eating little and choosing his food carefully. His teaching was that everyone eats too much after the age of forty.

Carbohydrates and fats particularly must be taken in moderation, and sweets must be abstained from entirely. Liquids should not exceed by much two pints daily. At the same time, one should go through a reasonable amount of exercise, including walking, cycling, riding on horseback, mountain climbing, gymnastics, athletics, etc. Turkish baths and

massage are very valuable additions to any anti-obesity treatment, but care should be exercised where there are indications of fatty heart. I may also mention the Bergonié method already referred to under the heading "Electricity."

637. As to drugs, it may be said as a general principle that they are neither desirable nor necessary, and that as a matter of fact they are sometimes actually injurious. Of late thyroid gland extract has become a favourite remedy against obesity, and it certainly does some good where diet alone is insufficient, but it must be taken with care and discrimination because it may aggravate any existing or threatened weakness of the heart. It should always be commenced in small doses (say, half to one grain twice or three times daily after meals) and increased gradually. (*See under* "Thyroid Gland.")

Another drug which is much used and which is said to constitute the main part of many advertised anti-fat remedies is fucus vesiculosus or sea wrack, probably on account of the iodine which it contains. The liquid extract may be given in doses of half a teaspoonful to two teaspoonfuls before meals, but it should be discontinued as soon as signs of iodism show themselves.

Regular action of the bowels is essential. Indeed, this is perhaps the chief element in the effectiveness of some mineral waters or certain well-known spas, like Marienbad. Carlsbad, Epsom or Glauber salts taken, if necessary, every morning before breakfast are very useful.

638. Under the heading "Diet and Dietetics" will be found a list of articles permitted and forbidden to those who wish to get rid of superfluous fat, but I wish to say here a few words on the dietetic systems universally known as the "Banting cure" and the "Salisbury cure." It must be distinctly understood that neither of them, nor any other particular system, answers in every case, though practically they are, with certain exceptions, only systematic applications of the well-known principles enunciated above. The cause of failure may or may not lie in counteracting errors, dietetic or otherwise.

The Banting cure consists of a diet of meat in generous quantities, with the avoidance of bread, butter, milk, sugar, beer, and potatoes.

The essentials of the Salisbury system are the drinking of hot water in large quantities and a diet of about two-thirds lean meat and one-third vegetables.

A concluding hint: Obese people should sleep as little as possible.

Occupational Diseases **639**

Many forms of employment produce by their very nature conditions of ill-health which can only be cured by the choice of some other occupation. Writer's cramp is a well-known illustration. Others are painter's colic, housemaid's knee, miner's lung, etc., etc. (Consult Index.)

Œsophagus, Diseases of **640**

The œsophagus or gullet along which food passes from the pharynx to the stomach is subject to various diseases and injuries, the most frequent being stricture which may result from such causes as the swallowing of corrosive poisons, tuberculous or syphilitic ulceration and cancer. The chief symptoms of stricture of the œsophagus are pain and difficulty in swallowing

(dysphagia). In hysterical women the œsophagus undergoes sometimes muscular spasms which resemble stricture, but the absence of other local signs makes diagnosis easy. The œsophagus symptoms of stricture of the œsophagus may also suffer compression from an aortic aneurysm or some other tumour in the locality and thus make swallowing difficult.

Temporary stricture is treated by the use of dilating bougies and a liquid diet. If this is insufficient it becomes necessary to perform the operation known as œsophagotomy—or opening of the œsophagus.

Foreign bodies get sometimes impacted in the œsophagus, and if they cannot be removed by special instruments known as probangs or pushed down into the stomach the same operation has to be performed without loss of time. Protrusions along the œsophagus are spoken of as "Diverticula," and they are liable to become dilated, thereby causing much trouble.

Open-Air Treatment **641**

The open-air treatment of consumption is now an established institution, and many cases unquestionably get completely cured by it. But the treatment must be carried out systematically and not in an haphazard fashion. Hence the necessity of special sanatoria under medical supervision.

Where for various reasons the patient has to undergo the treatment at home, fairly good arrangements can be made. If a garden or yard is available a shelter can be put up at no great cost. Or simple folding screens adjustable to any angle may be fixed to corners of walls. The patient should spend most of his time outside, and that not only in the summer, but also in winter. As long as he is warmly clad or covered with blankets, if lying on a bed or couch, there is no danger. As a matter of fact, the results are often more satisfactory in cold than in warm weather. The same remark applies to sleeping out at night.

If the patient has to remain indoors he should be in a room with the windows wide open night and day. As a protection against dust and flies gauze-screens should be used. There should be no fear of draughts. A draughty room is healthier than an ill-ventilated one.

Ophthalmoscope **642**

This is an instrument consisting essentially of a small mirror with a central perforation used for the purpose of lighting up the interior of the eye so that it may be examined. The rays of light are obtained from a lamp and made to reflect on to the background of the examined eye from the concavity of the little mirror. It is possible by means of the ophthalmoscope to confirm or disprove the allegation of a suspected malingerer that he is short-sighted or long-sighted.

Orbit, Diseases of **643**

The orbits in which the eyes are located are subject to diseases and injuries, such as inflammation, erysipelas, lacerations, fractures of the bones, and tumours. All these are particularly dangerous on account of the proximity of the brain. The treatment in each case is essentially the same as in other parts.

Opotherapy (Organotherapy) **644**

These are the names by which we describe the treatment of disease by animal organs or extracts from the same. Among the organs so employed

I may mention the thyroid gland (situated in front of the neck) which is used against myxœdema, cretinism, obesity, and other illnesses; the testicles, extracts from which are used in nervous diseases; the supra-renal bodies, the pituitary body, the ovaries, the brain, the bone-marrow, etc., etc. Most of these preparations are now obtainable in convenient tablet form.

Opsonins and Opsonic Index **645**

Opsonins are substances contained in the blood which have the power of influencing the bacteria of infectious diseases so as to render them more easily attacked by the white corpuscles. The opsonic index is an indication of the power of a patient's blood to deal with the bacteria. These terms refer to auxiliary steps in the treatment of infectious diseases, including tuberculosis, by vaccines. I have only mentioned them for the benefit of readers who may have occasion to want to know their meaning, but they are much too technical for me to attempt to discuss them here at any greater length.

Osteomalacia **646**

By this term we understand a condition in which the bones become unduly soft so that they bend or break on the slightest provocation, giving rise to various deformities. It affects chiefly women, especially those of a child-bearing age, who are exposed to much hardship and do not have sufficient food. Osteomalacia—or mollities ossium, as it is also called—is a somewhat mysterious disease, and once established there is no treatment for it—except rest and plenty of nourishing food, including bone-marrow and cod-liver oil.

The disease is almost endemic in certain localities on the Continent, but is rather rare in Great Britain.

Overlaying **647**

The accidental death of a child by suffocation through overlaying is now regarded as a criminal offence, and parents are warned not to let children sleep with them in their beds. Every infant should have its own cot—even though it be nothing else but an orange-box lined with a blanket.

Oxaluria **648**

Oxaluria or the excessive presence of oxalic acid and oxalates in the urine leading eventually to gravel and stone in the kidney or bladder is largely a product of the diet, such substances, for instance, as rhubarb and asparagus being particularly liable to give rise to it. For the rest, the treatment of the condition is the same as that of the uric acid diathesis, with which it is practically identical.

(*See under* "Urine, Abnormal Conditions of.")

Pain **649—650**

Pain is the sensation experienced through irritation of a sensory nerve. In estimating the nature of a pain, consideration must be given to the temperament of the individual concerned, some persons being more sensitive to pain than others. Many people are also given to exaggerating the pain they feel, while others—fewer in number—tend to under-estimate it.

Hysterical patients as a rule magnify any little pain that worries them. The accustomed eye of an experienced doctor will soon distinguish real from imaginary pain or severe pain from exaggeration. One has only to watch the facial expression and attitude to

appreciate at its full value the complaint of the patient. Genuine pain reveals itself almost at the first glance by a drawn face, a small pulse and dilated pupils.

650. There are several varieties of pain, though as a matter of fact it is not always easy to distinguish one from the other. Acute pain is suggestive of acute inflammation, dull pain of chronic affections or of disease of internal organs, a throbbing pain is characteristic of abscess, lightning or girdle pains are symptomatic of locomotor ataxy, and so on.

One may take it as a sort of general rule that a pain which travels about from one place to another is probably functional and therefore not dangerous. On the other hand, pain which is constant and stationary should be regarded as a sign of local organic disease. In elderly people cancer often begins with an annoying pain in one particular place or region, which does not yield to sedative remedies.

The treatment of pain as such depends upon the cause of it, and its locality. The reader is referred to the respective headings.

Palate, Diseases of **651**

Th palate or roof of the mouth consists of the hard palate, the bony, portion in front, and the soft palate or the muscular portion at the back. It participates in diseases of the mouth and the tonsils and is besides subject to congenital abnormalities, of which the one known as "cleft palate" is the commonest.

Paralysis of the palate is a common complication of diphtheria and it shows itself principally in inability to swallow food and drink which are liable to escape through the nose. The speech, too, is affected. Special treatment is hardly ever required. As a rule, the paralysis disappears after a few days, with or without the help of electricity.

Pancreas, Diseases of **652**

The pancreas, popularly known as the sweetbread—is a large gland situated behind the stomach, the function of which is but imperfectly understood. It is known, however, that it plays an important part in connection with the function of digestion and that some obscure forms of indigestion result from disease of the pancreas. It is also supposed that diabetes is frequently caused by disease of this organ. Many obscure and fatal illnesses are discovered by a post-mortem examination to have been due to pancreatic disorder.

Diseases of the pancreas are exceedingly difficult to diagnose and as the only possible treatment of them is by surgical operations, an exploratory opening of the abdomen is a justifiable proceeding in all obscure abdominal diseases in which the pancreas may possibly play an important part. Disease of the pancreas is almost always fatal.

Paralysis **653—660**

By paralysis we understand the loss of power of the muscles to contract at will in order to carry out contemplated movements. This is known as motor paralysis. When the paralysis consists in the loss of the sensation—that is, if the part affected does not feel, say the prick of a pin, we speak of sensory paralysis. Slight paralysis is spoken of as paresis.

The cause of the paralysis may lie in some disturbance in the brain, the spinal cord, or the nerves, and reference to the Index will show of

what diseases paralysis is one of the symptoms.

Where there is no organic disease to account for the paralysis, we speak of "functional" or "hysterical paralysis." (*See under* "Neurasthenia.")

When the whole of one side of the body, including the arm and leg is paralysed, we speak of hemiplegia. Paraplegia means paralysis of the lower half of the body including the legs and the abdominal organs. Monoplegia means paralysis of one arm or one leg only.

654. Acute ascending paralysis or Landry's paralysis is a fatal form due to disease of the spinal cord. It begins in the feet and extends upwards very rapidly, without causing any pain or sign of wasting.

Amytrophic paralysis means paralysis accompanied by wasting.

Crutch paralysis occurs in one or both arms through pressure on the nerves of the arm-pit from the head of the crutch.

Spastic paralysis means paralysis with stiffness of the muscles.

General paralysis of the insane is discussed under its own heading.

655. Paralysis agitans known also as shaking palsy or Parkinson's disease is a form of paralysis seen, as a rule, in elderly people and characterised by more or less constant shaking of the limbs and a tendency to loss of equilibrium. The shaking or tremor goes on even when the patient is resting, whilst the head is usually nodding. The speech is slow and monotonous, whereas the mental faculties remain unimpaired. In advanced cases there is a curious complication to be observed in the manner of walking. The sufferer starts with a gradual increase in the rapidity of his locomotion until he develops a fast run with the result that he either falls down exhausted or else leans against some support. The phenomenon is known as "festination." Paralysis agitans is a very chronic disease, and may last for many years.

656. Infantile paralysis (poliomyelitis) is an affection of childhood generally of an acute character which attacks the central nervous system, principally the spinal cord, and is followed, as a rule, by recovery, though leaving behind some deformity or other as well as wasting of the muscles. It is now established that the disease is an infectious one, being produced by a definite microbe which is generally transmitted by "carriers." (*See under* "Enteric Fever.") Hence the epidemics which have occurred at various times. The symptoms come on suddenly and are marked by high temperature, vomiting, and convulsions. Shortly afterwards, the paralysis becomes apparent. The disease rarely attacks children of more than three years of age, and is more prevalent in the summer months.

The numerous cases of so-called "encephalitis lethargica" which have occurred within the last few years in a more or less epidemic form and have been erroneously called "sleeping sickness" (*see also under* "Sleep, Disorders of"), were supposed to have some connection with infantile paralysis, but this is no longer believed to be the case. Nor were they due to food poisoning, as it was also suggested, but the cause probably lay in a specific microbe as yet unknown. The symptoms of the illness are lethargy passing into coma, visual disturbances and involvement of the nervous system.

657. Paralysis of the vocal cords—or laryngeal paralysis occurs through

several causes, including straining of the voice, cold, tumours in the neighbourhood, etc., or it may form part of a central nervous disease, organic or functional. Apart from loss of voice, the symptoms may consist of shortness of breath and a feeling of suffocation. The treatment depends upon the cause, but electricity is nearly always beneficial. (*See also under* "Hysteria.")

658. Facial paralysis or Bell's palsy is generally caused by disease of the nerve which supplies the muscles of the face and the seat of the injury is, as a rule, inside the skull though occasionally it may be outside as the result of a blow.

When due to exposure to cold or a draught the illness comes on suddenly and is nearly always unilateral—that is, only one side of the face is affected. The first thing noticed is inability to close one eye properly, and after that other signs appear, such as displacement of the lips when smiling; inability to expectorate, whistle, or swallow as normally; tingling of the tongue; lack of expression, accumulation of food between the jaws and the cheek; depression of the corner of the mouth with the face drawn towards the healthy side. The absence of unconsciousness distinguishes facial paralysis from hemiplegia and paralysis of the brain generally. But if there are signs of paralysis also in other parts the disease lies in the central nervous system.

Apart from the treatment by electricity, to be mentioned presently in connection with all forms of paralysis, potassium iodide is of great service in paralysis of the face. A dose of 5 or 10 grains should be taken two or three times daily after food in a little water, and this should be continued for two or three weeks. Recovery takes place in most cases, though sometimes it takes a little longer or it is not quite complete. Relapses are also apt to occur. In obstinate cases one should try the occasional application of blisters in front of the ear, and Turkish baths.

659. There are many more terms in connection with paralysis which are less frequently employed than those I have mentioned so far. I will briefly refer to a few of them. Bulbar paralysis is a form in which the upper part of the spinal cord is affected and the paralysis is seen particularly in the muscles of the tongue, lips, and larynx. Crossed paralysis means paralysis of the arm and leg of one side, with paralysis of the face or of the eye on the opposite side. Duchenne's paralysis is another name for muscular atrophy of nervous origin; it is also called "wasting palsy."

660. The treatment of paralysis is on the whole not satisfactory. Many cases get better, but very slowly. The principal remedies depended upon are rest, massage, and electricity, but each case must be treated on its merits. Sometimes, as in paralysis agitans, it becomes necessary to prescribe sedatives, such as opium or hyoscine. In other cases nervine tonics, like the hypophosphites, are of greater value. During the acute stage of infantile paralysis the treatment is like that of other fevers, afterwards like that of paralysis generally. If deformities, of which club-foot is the commonest, develop, they must be treated as circumstances demand, either by suitable appliances or surgical operations.

Parasitic Diseases 661—663

In the narrower sense parasitic diseases are those caused by animal parasites sufficiently big to be visible

by the naked eye—that is without the aid of a microscope. The principal of these parasites are insects infecting the outside of the body, and worms, which make their habitation chiefly in the intestines.

The insects include a large number of varieties, the commonest being flies, fleas, bugs, lice, and the itch—acarus or tick. Apart from the discomfort which they cause by their bites (*see* "Bites and Stings") or irritation of the skin, insects may carry disease from one individual to another, either directly or through the medium of an animal. Plague for instance, has been shown to arise in this way, the intermediate agency being the rat.

662. Anti-parasitic remedies exist in a great number of forms. There are insect-powders—like Keating's—sprays and lotions. Fumigation with sulphur will keep bugs away. The sprinkling of a little chloroform over clothing will kill fleas and other insects. Pediculi (lice) of the head in children are a well-known nuisance, and they may give rise to conditions of ill-health, particularly swollen glands in the neck and at the back of the ears. The simplest way to get rid of them is to soak the hair well with a mixture of kerosene oil and olive oil in equal parts, or with ordinary paraffin oil, and to apply a suitable covering, say a bathing-cap. This to be repeated two or three nights in succession, washing off the oil next morning with soap and warm water.

Cutting off the hair makes the treatment more easy and effective. Sometimes the nits or eggs are rather difficult to remove. In that case the hairs should be soaked with methylated spirit—keep away from light and fire! —and the nits having been loosened they can be removed with the aid of a fine-toothed comb dipped in vinegar.

If these directions are carried out properly and not in a half-hearted manner the trouble can soon be remedied. Doctors often hear mothers complain that they have tried "all kinds of lotions and ointments, and failed to shift the insects or the nits." As a rule it means that they have done nothing of the sort, and not even tried soap and water—which, by the way, is an excellent preventive.

663. Pediculi of the body (crabs) especially in hairy parts, like the armpits can be got rid of quickly by cutting off or shaving the hair and using liberally sulphur ointment, or white precipitate ointment or carbolic acid lotion. Thymol also may be recommended for the purpose. The main thing, however, is to disinfect all clothes, underclothes, bed-linen, etc., by baking or boiling—otherwise there is infection and reinfection over and over again.

The itch-acarus and worms are dealt with under separate headings.

Peliosis Rheumatica 664

This affection known also as purpura rheumatica is characterised by the eruption on the skin of a reddish rash accompanied by severe rheumatic pains in the various limbs and joints, more or less feverishness and general lassitude. The cutaneous spots are most marked on the extremities and do not disappear on pressure.

The disease is regarded as an acute infection somewhat allied to rheumatic fever, and the treatment is practically the same as in the latter illness. Turpentine may be tried internally, either in 5-minimcapsules or in 5 drops on a lump of sugar, twice daily after food.

Pellagra **665**

This is a disease which occurs mostly in countries where maize forms one of the staple foods of the people. In Europe it occurs in Italy, South of France, Spain, and Roumania; in America in some of the Southern States. The cause is supposed to lie in some insect or parasite which contaminates the maize.

The early stages of the disease are characterised by general debility, digestive disturbances, diarrhœa, and pain in the head, back, and limbs; later the skin shows different kinds of eruption, especially in exposed parts, which keep recurring every summer. In severe cases there are in addition mental disturbances and nervous manifestations including degrees of paralysis, insomnia, dizziness, etc. Many of the patients die eventually in lunatic asylums.

So far, the treatment of pellagra is not very hopeful and it must be largely preventive. Any maize which presents a doubtful appearance should not be allowed to be eaten either alone or in combination with other articles of food.

Each symptom is to be treated as it occurs. Arsenic is given to many of the patients with some amount of success. Salvarsan has been tried, but has not proved of great value. A Roumanian author reports satisfactory results from the employment of what he calls an "organo-polymineralised serum" extracted from horse's blood and other substances.

Pemphigus **666**

This is an eruption of the skin in the form of blebs which contain pus, or blood, or nothing but serum. The blebs may be located in one or two paces only, or they may cover the whole of the body, appearing in successive crops. Usually the scalp remains free.

Pemphigus is seen mostly in children and young people, and more frequently in women than men. The treatment consists in the application externally of calamine lotion or zinc ointment, after the blebs have been evacuated, and the internal administration of a tonic like quinine and iron.

Some very rare forms of pemphigus are rapidly fatal.

Percentage of Solutions **667**

In speaking of solutions of a certain percentage in strength, we mean the weight of solid substance to be dissolved in a hundred parts of water. For instance a one per cent. solution of carbolic acid means roughly four-and-a-half or five grains of carbolic acid dissolved in an ounce of water; a five per cent. solution of bicarbonate of soda means about twenty-five grains of it to an ounce of water, and so forth.

Pericarditis **668**

Inflammation of the pericardium—or the sac in which the heart is enveloped. The symptoms are pain over the heart, feverishness, shortness of breath, and a small, rapid pulse. The disease may arise either in the course and as a complication of a case of acute rheumatism, or as an independent rheumatic manifestation. Complete rest in bed, and a light diet will favour rapid recovery, though the heart may remain permanently weakened. If necessary, hot poultices, blisters or ice-bags are employed in addition. Should there be a large accumulation of fluid in the pericardium through the inflammation it becomes sometimes imperative to liberate it by a surgical operation.

Peritonitis **669—670**

By peritonitis we understand inflam-

mation of the peritoneum, or the covering membrane of the abdominal organs situated deep under the abdominal skin and muscles.

Acute peritonitis generally follows disease or injury of one of the abdominal organs, for instance, ulceration of the stomach, appendicitis, inflammation of the ovaries, etc., or it may occur independently through exposure to cold and damp. The symptoms are severe pain which is first localised in one spot, spreading afterwards over the whole abdomen, vomiting, and fever. The sufferer is collapsed and death frequently occurs in less than twenty-four hours. In the days before antiseptics were introduced, most operations of the abdomen ended fatally because peritonitis supervened in nearly every case. Nowadays, this is an exceedingly rare event.

Peritonitis may be mistaken for a number of other diseases, and it is one of the conditions the recognition of which is not always easy. The treatment must be left in the hands of a doctor from the very beginning, and he will in many cases recommmend an immediate operation. Until he arrives, put the patient to bed, apply hot poultices and do not give opening medicine.

670. As to the chronic cases of peritonitis, they are generally due to tuberculosis or cancer, and the treatment will therefore depend upon the cause. Here, too, an operation is often necessary.

Perspiration, Disorders of 671—678

Excessive perspiration (hyperidrosis) is a frequent complaint, the cause of which is rather obscure. It is supposed to be connected with some disturbance in the central nervous apparatus. It often accompanies consumption and other exhausting diseases, but in many cases it forms the only sign of ill-health, when it is not of serious importance though a source of inconvenience.

The excessive perspiration may be general, all over the body, or local, when it is confined to definite places, like the arm-pits, the palms of the hands, or the feet.

672. Occasionally the perspiration gives rise to numerous pimples or vesicles. This condition is called "prickly heat." (*See* "Miliaria.")

673. Profuse perspiration is rather difficult to treat successfully. The external application of liniment of belladonna answers sometimes.

In other cases a lotion of liquor carbonis detergens—two drachms to the pint of water—may be used with advantage. Milder cases give way to sponging with vinegar and water or eau de Cologne. In the case of the arm-pits, it is advisable to cut off or shave the hairs, when these remedies can be applied with greater ease. After drying, the parts should be dusted with a powder consisting of 20 grains salicylic acid, two drachms of powdered starch and alum powder to make half an ounce.

674. When the feet perspire excessively, they should be washed daily with hot water and soap, and after drying thoroughly, dusted with boracic acid powder. The insides of the stockings and boots should be similarly dusted. Cork socks should be worn and changed frequently.

675. This treatment must be carried out persistently, especially in those cases where the perspiration is not only excessive but also of an offensive odour—a condition known as bromidrosis. The rare cases of coloured

sweat are generally accounted for by the mode and nature of the employment, or the articles of dress worn.

Persons given to excessive perspiration should restrict the amount of fluid they drink, and take hot baths frequently, followed by cold douching. They should wear flannel underclothes next to the skin.

676. Flat-footed people are very much troubled with hyperidrosis and bromidrosis of the feet. It is therefore important to correct the original defect as much as possible.

In some very obstinate cases of profuse perspiration, the X-rays are of decided value.

Anæmia is a frequent cause of hyperidrosis in women, alcoholism in men. To cure the effect, one must therefore treat the cause.

677. Some people complain of absence or insufficiency of perspiration (anhydrosis). Unless this is due to some feverish disease, to diabetes, or to an affection of the skin such as ichthyosis or leprosy, it is perfectly consistent with good health, even though there be no perspiration after exertion. At any rate, warm baths and shampooing are means by which perspiration may be furthered. The fact is that "insensible" perspiration in which the liquid is evaporated as fast as it is secreted is always going on without being felt or seen.

678. We hear occasionally of bloody sweat, especially in young hysterical females. The complaint should always be received with scepticism and investigated thoroughly to guard against deception. But the condition is not an impossibiliy, and may be a symptom of hæmophilia or due to the presence of blood pigment in the sweat.

Pharyngitis (Simple Angina) 679

Pharyngitis means inflammation of the pharynx—or back of the throat. It generally forms part of an acute, catarrhal condition of the neighbouring parts—including the nose, tonsils and larynx. Other and more chronic causes are abuse of alcohol, excessive smoking, the continual use of the voice, hence the name "clergyman's throat," etc. The treatment is not much different from that of laryngitis. Gargles of diluted glycerin of tannin, or of alum, and lozenges of tannic acid, are beneficial, or the throat may be painted with a solution of perchloride of iron, a teaspoonful to an ounce of water. *(See also under* "Catarrh," "Laryngitis," "Tonsils," etc.)

Pityriasis 680

In this term are included several forms of skin affection which are characterised by the peeling off of branny scales. To some extent dandruff is also regarded as a form of pityriasis.

The variety known as pityriasis or tinea versicolor is the commonest. It consists of large and small yellowish patches chiefly on the trunk, and is supposed to be due to the presence of a fungus or vegetable parasite. Itching may result, but it is not as a rule very severe. Persons who wear chest protectors or clothe themselves very warmly in flannel or wool are liable to be affected. Perhaps this is the reason why it is so common in consumptives and not so much because of the original disease. Infrequent change of underclothing favours the development of the patches. The disease is to some extent infectious, being occasionally seen in both husband and wife.

Pityriasis is not a dangerous illness, and it readily yields to antiparasitic

treatment. The use of a lotion of a saturated solution of hypophosphite of soda preceded by scrubbing with soap and water will soon remove the scaly patches. In milder cases washing with vinegar alone is sufficient. At the same time it is necessary to disinfect all underclothes by boiling or with formalin.

Plague **681**

Plague, called also inguinal or bubonic plague, is a highly dangerous infectious disease produced by a microbe named "bacillus pestis." It occurs in epidemics, and the symptoms are severe feverishness, swelling of the glands in the groins and in the armpits, and the occurrence of boils and carbuncles.

The treatment is more of a preventive than curative nature. The latest method is by inoculation similar to vaccination, the substance injected being a serum prepared from the blood of a horse rendered immune against plague. It has recently been ascertained that rats act as disseminators of plague, and that fleas carry the infection from the rats to human beings.

The death-rate of plague is no less than 80 per cent.

Plethora **682**

Though the term is not used very much now, one comes across it occasionally. It means a disorder of the circulation consisting of an excess of blood in blood vessels, and shows itself by a reddish colour of the face (phlethoric or florid complexion), a full pulse, throbbing headache, drowsiness, and a tendency to bleeding from the nose.

The treatment consists principally in the adoption of a strictly limited diet and in free purgation.

Pleurisy **683—685**

Pleurisy (or Pleuritis) means inflammation of the pleura—the membrane covering the lungs and situated inside the chest cavity. The causes of pleurisy are many, the most frequent being exposure to cold, but very often pleurisy is a complication of other diseases, such as consumption, Bright's disease, rheumatic fever, etc. Pleurisy comes on mostly in an acute manner, the first symptoms being severe pain in the side (stitch) which is aggravated by the act of breathing and by coughing or sneezing. Severe feverishness follows soon, and the patient is seen to be seriously ill, the temperature ranging from 100 to 102 degrees.

On examining the chest the doctor finds an accumulation or effusion of fluid in the pleural cavity which interferes with the breathing sometimes to such an extent as to cause death rapidly if not removed by aspiration or tapping.

Fortunately many cases recover, but often especially in children, the fluid in the pleura turns into a large abscess, forming the condition known as empyema. The chest must then be opened so that the pus may be liberated.

684. In the early stages of acute pleurisy the treatment is by rest in bed, a light diet, the application of hot poultices, and the administration of pain-killing remedies, like opium or morphia. Magneusium sulphate or other aperients are also given to further absorption of the fluid.

Each doctor, however, has his favourite method of treatment.

685. Chronic pleurisy with so-called adhesions which restrict the movements of respiration often develops after an acute attack, and may require

operative treatment, if hygienic measures, including life in the open air and good nourishment, do not affect a cure.

If the symptoms become worse and if there is expectoration of offensive-smelling sputum this may be regarded as a sign that an empyema has developed.

Deformities of various kinds may result from chronic pleurisy.

The outlook is always unfavourable if the pleurisy is of tuberculous origin, otherwise the chances of recovery are on the whole satisfactory.

Pneumonia **686—688**

This is one of the most frequent and also one of the deadliest diseases to which human flesh is liable. It means an inflammation of the substance of the lungs, as opposed to bronchitis in which the bronchi—or tubes carrying the air to the lungs—are inflamed.

Doctors speak of two kinds of pneumonia. The lobar or croupous pneumonia occurs generally in adults and affects large areas of the lung. It is now regarded as an infectious disease in the sense that it is caused by a microbe called pneumo-coccus, but it is not contagious from person to person. The second form is that known as catarrhal or lobular pneumonia or as broncho-pneumonia. It affects children and delicate old people.

687. The symptoms of pneumonia which come on suddenly with a feeling of chill and perhaps shivering fits are a high degree of fever, shortness of breath, pain in the side of the chest, cough, and expectoration of blood-stained (rusty-coloured) sputum. The cases which recover take a sudden turn for the better generally about the seventh day from the beginning of the illness. They are said to end by crisis. Other cases get better slowly (by lysis), but many go from bad to worse, ending fatally between the fifth and the tenth days. This, as a rule, happens in patients whose constitutions are debilitated by excess of alcohol or through other causes.

Pneumonia may be accompanied by various complications, such as pleurisy, heart disease, Bright's disease, etc.

688. As to treatment, the sooner a doctor is called in, the better. Rest in bed and a light nutritious diet (milk, eggs, beef-tea) are, of course, essential. Relief may be procured in the early stages by the application of hot linseed-meal poultices over the painful side, changed every two hours. Hot flannels wrung out of turpentine may also be applied with benefit. Some doctors prefer the application of ice-bags over the chest, and this does good in some cases. The administration of an aperient medicine is desirable, but this must be left to the decision of the doctor, who will also prescribe the necessary remedies to ease the pain and the cough or stimulate the action of the heart.

In severe cases, inhalations of oxygen may save the life of the patient. Blood-letting is practised occasionally in the case of young and vigorous persons of plethoric type.

Convalescence after pneumonia is hastened by a change of air, tonics, and a generous diet. On the subject of alcohol, doctors differ. Personally, I am in favour of a reasonable allowance, but the danger of creating the drink habit must not be ignored.

Pneumothorax **689**

This means the presence of air in the pleural cavity in which the lungs are situated, the air proceeding from

an injury—internal or external—to these organs. Such an internal injury occurs, as a rule, through perforation of a tuberculous lung. The symptoms are sudden pain, extreme shortness of breath and general collapse. There may be some bulging of the chest.

The outlook in pneumothorax is very unfavourable, and the treatment can only be directed towards relieving the symptoms.

On the other hand, various diseases of the lungs, especially pulmonary tuberculosis, have for some years now been treated with satisfactory results by a new method which consists in the formation of an artificial pneumothorax by the introduction of gas into the pleural cavity.

Poisons and Antidotes 690—691

The information here given is supplementary to that contained under the heading "First-Aid" and must not be regarded as exhausting the subject, though it deals with the poisons most commonly employed for suicide or by accident. The first rule in cases of poisoning is to give an emetic, or to wash out the stomach in order to remove the poison not yet absorbed. To this rule there is, however, an exception, namely, when the poison is of the so-called "caustic" class—including acids like spirits of salts, oil of vitriol, salt of lemons, carbolic acid, or alkalies like caustic potash or strong ammonia. In the case of these the use of emetics is dangerous and must be replaced by other measures, such as the administration of milk (very freely), white of egg, flour and water, whisky or brandy, olive oil diluted with water, or Epsom salts, if the latter are at hand, and the poison was an acid.

In the case of carbolic acid, the use of the stomach tube by an experienced person is justified, but it must be done very cautiously.

691. The immediate use of emetics is indicated in poisoning by aconite, prussic acid, arsenic, corrosive sublimate, phosphorus, belladonna, chloral, cocaine, opium and morphia, ptomaines, strychnine, sulphonal, and turpentine.

Emetics nearly always at hand are copious draughts of lukewarm water, mustard (a tablespoonful) in warm water, and common salt (a tablespoonful or more) in warm water. Sulphate of zinc, and sulphate of copper, if at hand, act very rapidly, the former in single doses from 20 to 30 grains, the latter in 3 or 4-grain doses every few minutes.

In chloroform poisoning, cold water should be poured over the head and face, and artificial respiration must be instituted at once.

Where there is collapse, the patient must have stimulants and fresh air, and medical aid should be summoned without delay.

Hot coffee is a very good stimulant in cases of poisoning by most of the poisons named above, especially opium and morphia.

Polypus 692

This term is used to denote a small growth attached by a pedicle to the surface of a mucous membrane from which it has sprung. A polypus is very seldom malignant, and if removed does not, as a rule, return. The usual places for polypi are the interior of the nose, the ear, the windpipe, the lower end of the bowel, and the womb. The only treatment is removal by the knife, or if easily accessible by ligature.

Polyuria **693**

This term denotes the passage of excessive quantities of urine, but is used chiefly for temporary occurrences of the kind which happen after the drinking of large quantities of water or other fluids, after hysterical or epileptic fits or in healthy persons when in a state of nervous excitement. If the polyuria is constant it forms a symptom of diabetes or Bright's disease.

Most people pass more urine than normally in very cold weather when the perspiration is diminished or arrested. The reverse is the case when the perspiration is increased in amount.

Poultices **694—696**

Poultices, like fomentations, are applied for the purpose of providing definite parts of the body with heat and moisture. They are used principally to relieve pain and inflammation, and for that reason are sometimes medicated with various substances. The following is a plan which may be adopted with benefit when poultices are required. Make several bags of different sizes preferably from material known as cheesecloth, and fill each bag half-full with the linseed meal or any other substance to be used. Sew up the open end. When the poultice is wanted submerge one of these bags in boiling water by a piece of tape or string, when it will swell up and become quite full. Squeeze out the superfluous water and place the bag where required after covering the part with oiled silk or mackintosh. If the latter is not available a piece of butter paper makes a fair substitute. Cover the poultice with cotton wool and bandage.

695. Mustard poultices are employed for producing counter-irritation, and unless it is actually desired to bring about blistering of the skin, they should only be allowed to remain on till it has become red. This may take from a quarter to half an hour or longer, when the patient complains that he cannot endure the smarting. In removing the poultice, the part should be smeared with vaseline or oil and bandaged.

696. Charcoal poultices are sometimes prescribed for antiseptic purposes in the case of septic wounds. They are made of linseed meal or breadcrumbs to which is added about a fifth part of finely powdered wood-charcoal, and are generally applied direct to the surface without covering the latter with oiled silk or muslin. (*See* "Fomentations.")

Prostate, Diseases of **697—699**

The prostate or prostatic gland is an organ which is present in men only, being situated between the lower end of the bowel and the neck of the bladder. It is subject to a number of diseases, the commonest of which is enlargement or hypertrophy. The causes of this affection are not known, but it seldom occurs in men who have not yet reached middle age, and is frequent in men of sixty and upwards. The symptoms are an increased frequency of urination, especially at night, accompanied by inability to empty the bladder fully. In time the difficulty becomes so great as to constitute retention of urine. In consequence the bladder may become inflamed. The usual treatment of the condition is by the employment of a sound or catheter either at frequent intervals or regularly (catheterisation) but in cases in which the enlargement is too great to yield to it, a surgical operation becomes a necessity.

698. The prostate is also sometimes the seat of inflammation, acute or chronic (prostatitis). There is a sensation of heat or weight in the perineum (the part in the front of the anus) or in the rectum, a throbbing pain and increased frequency of urination. At the same time there is feverishness and a feeling of general illness. The treatment consists in rest, elevation of the hips, hot sitz-baths, and the application of hot fomentations. If the bowels are constipated a laxative should be given. Should an abscess form, it will require an incision.

699. Chronic prostatitis may be the result of an acute one, or it may come on gradually with or without enlargement of the organ. There is some pain in the perineum as well as in the thighs, a constant desire to make water, and a more or less prounced discharge from the urethra of a clear, sticky gelatinous fluid. Not much can be done to alleviate the condition, but one may try lukewarm sitz-baths, followed by cold douching of the parts and painting occasionally with tincture of iodine.

Psoriasis **700**

Psoriasis is a frequent skin disease which consists of raised red patches covered with thick silvery-white adherent scales. It generally begins on the surface of the knees and elbows, spreading afterwards in large patches over the rest of the body and nearly always symmetrically. The face and scalp and the palms and soles generally remain free. As a rule there is no itching.

Psoriasis is a very chronic disease lasting in some people a whole lifetime. It does not as a rule affect the general health, which remains good. Indeed psoriasis is often called "the skin disease of the healthy." Heredity is supposed to have something to do with it; gout and rheumatism are also regarded as causative factors.

The treatment consists of the internal administration of arsenic in suitable doses as pill, mixture, or arsenical mineral water, cod-liver oil and general tonics, and the outward application of tar and other preparations. Among these may be mentioned a lotion of liquor carbonis detergens—one or two drachms to the pint of water—well shaken and applied by means of pieces of lint which should be allowed to remain on for several hours at a stretch; chysarobin ointment, ammoniated mercury ointment, ichthyol ointment, and others. It is advisable before applying the lotion or ointment to remove the scales by soap and water, by an alkaline bath or with the aid of some oily substance.

Often the best thing is to leave the psoriasis alone and not to worry about it. It is certainly an inconvenience, but not dangerous.

Chrysarobin ointment being very often used, it may be of interest to mention that the stains which it produces can be best removed by the use of a weak solution of potash.

Ptomaine-Poisoning (Food poisoning) 701

Ptomaines are poisonous substances produced by the decomposition of animal and vegetable matter. The symptoms of ptomaine-poisoning are vomiting and diarrhœa, colicky pain, headache, and more or less general collapse; they set in as a rule suddenly about an hour or so after food, but may be delayed for as long as twenty-four hours, in which case they are sometimes accompanied by an eruption of the skin. The treatment of a case of ptomaine poisoning consists in adminis-

tering an emetic and giving stimulants afterwards. For a few days after that it is advisable to take an intestinal antiseptic, like salol, in 5-grain doses, once or twice daily.

There have been recently a number of fatal outbreaks of food poisoning resembling small epidemics in different parts of the country which has been attributed to bacteria, the most virulent of them being the *bacillus botulinus*. This latter is considered to be the causation in the cases known as *botulism* (which means, literally, sausage poisoning), and of which double vision is a characteristic additional symptom.

Pulse, Irregularities of the 702

It frequently happens when feeling the pulse that one notices every now and then an omission of the beat. The beat is then said to be "intermittent." In many persons this happens habitually without there being any disease associated with it. In other cases the symptom may arise from nervous excitement or through indigestion or in consequence of smoking to excess. Occasionally an intermittent pulse is a symptom of serious heart disease, but then there generally are other symptoms in conjunction with it.

An "irregular" pulse, both as to frequency and force is as a rule a symptom of heart disease.

A frequent pulse in females is often a sign of hysteria and of no serious importance. The pulse in children and often in old people is more frequent than in adults. Infants have a pulse of about 140 per minute, and it becomes slower as they get older. In the average adult it is from 70 to 75 per minute. In the recumbent position the pulse is less frequent than when sitting or standing, and in taller people the pulse is slower than in those of short stature.

The pulse increases in frequency during the act of walking or under mental excitement; also after meals and after taking a stimulant.

It is well known that in feverish conditions the pulse is very rapid (tachycardia). This is also the case in general debility and various other diseases.

A very slow pulse-beat—as low as twenty per minute (bradycardia)—is observed occasionally in jaundice, anæmia, etc., and in some nervous affections.

By dicrotic pulse we understand a sort of double pulse—the first stronger impulse being followed by a feeble one. It is generally a sign of diminished blood-pressure in the arteries.

The water-hammer pulse is distinguished by a short jerking impulse which seems to collapse under the finger. It is a sign of organic heart-disease, especially aortic insufficiency. (*See under* "Heart Diseases.")

Pupil, Irregularities of 703

A contracted pupil (myosis) to the extent of a pin point is generally the first sign of the morphia habit. Certain drugs, for instance, pilocarpin, have the effect of contracting the pupils. The pupil is more or less contracted in nervous and mental diseases. Heavy smokers and drinkers often show highly contracted pupils. Persons following occupations which cause the eyes to be always concentrated on fine objects, such as watchmakers, engravers, microscopists, etc., are apt to have contracted pupils.

The pupil generally contracts under the influence of a strong light; except in the condition known as "Argyll-Robertson pupil," a symptom present in locomotor ataxy and other nervous

diseases. (*See under* "Locomotor Ataxy.")

An abnormally dilated pupil (mydriasis) is often a sign of pain or excitement, or it may be a symptom of disease in the eyes or the brain. Certain drugs, chiefly belladonna and atropin, are known as dilators of the pupil or mydriatics. Neurasthenics generally have dilated pupils. The pupil is also dilated, as a rule, after a fright or mental shock.

Oscillations of the pupil after exposure to light is a sign of hysteria. This condition is known as *hippus*.

Inequality in the size of the two pupils is not necessarily a sign of disease. It may, however, be due to inequality in the visual power of the two eyes or to some affection of the brain. (*See* "Eye Diseases.")

Purpura **704**

This is an affection of the skin consisting of hæmorrhagic spots of various sizes and forms, which differ from the spots associated with the eruptive fevers (scarlet fever, measles, etc.), by not disappearing when pressed with the finger, and returning immediately the pressure is withdrawn. One form of purpura is described under the heading "peliosis rheumatica." In another form known as simple purpura resulting probably from indigestion, there are no rheumatic or other symptoms present, and the spots disappear in a few days. The form named "purpura hæmorrhagica" is characterised by large cutaneous red patches, at first on the legs and extending afterwards over the whole body. At the same time there are hæmorrhages from the mouth, gums, nostrils, bowels, etc., and symptoms of general depression along with an elevation of the temperature. This variety occurs often in young children, and proves fatal within a short time—purpura fulminans—particularly after an attack of infectious disease, like scarlet fever.

Certain poisons and certain drugs, such as quinine in large doses, may give rise to purpura-like rashes, but on the whole the cause of purpura is unknown. The treatment in the more serious cases consists of rest in bed and a spare diet. A dose of salicylate of soda—5 or 10 grains—may be given once or twice daily, and outwardly lead lotion should be applied by means of sponging. Where the purpura has a tendency of becoming chronic, a course of calcium lactate in doses from 5 to 20 grains—in tabloid form by preference—may be given to increase the coagulability of the blood. Arsenic also is a useful remedy in such cases, but should only be taken by a doctor's order. The same remark applies to treatment by serum.

Pyorrhœa Alveolaris **705**

A chronic disease of the teeth and gums characterised by a constant discharge of pus from the mouth, a foul breath, a gnawing pain, looseness of the teeth, and a tendency on the part of the gums to bleed on the slightest provocation. If not attended to quickly, the condition leads to general blood-poisoning. Many obscure cases of ill-health are traced to this cause. It is obvious that the treatment likely to do good must be left to the direction of the dentist who should be visited as soon as possible. (*See also under* "Alveolar abscess.")

Quarantine **706**

The term "quarantine," by which is meant the detention for forty days of a ship or its passengers in a place

of isolation with the object of preventing the spread of a contagious disease like cholera or plague, is not made use of much at the present time, as this method of guarding against infection has largely been superseded by regulations dealing with the compulsory medical examination of all suspects. But quarantine is still practised in some continental countries, especially in the east.

Raynaud's Disease **707**

This is a sort of gangrene which affects, as a rule, the fingers or toes in children and young people living in countries with a cold climate. The cause of it is not exactly known, though it is supposed to lie in some disturbance of the blood supply. Heredity, too, appears to be an important factor. The disease is practically incurable, and the treatment consists in removing the gangrenous parts. Life is generally not in danger. (*See also under* "Circulation," "Dead fingers," etc.)

Reflex **708**

Reflexes are muscular contractions or other actions obtained by irritation or stimulation of external parts. The best-known reflex is that known as patellar (*see under* "Knee-jerk.") Another example of a reflex is closure of the eyelids when the conjuctiva is touched. This is a valuable indication when a person is being given chloroform, because as long as the reflex is present the patient is not yet completely unconscious. Other reflexes are the plantar reflex or contraction of the toes when the sole of the foot is tickled and the ankle-reflex (ankle clonus) in which the contractions are obtained in the calf-muscles when the foot is suddenly bent backards by the hand of a second person. The presence, absence or exaggeration of a reflex is frequently of great diagnostic value.

Relapsing Fever **709**

This is an epidemic and contagious form of continued fever, with free intervals of several days' duration, seen especially in connection with famines and known therefore also as "famine fever." In the Irish famine of 1847, the disease played a great part and proved highly destructive. Within recent years it has become rare in these islands. It is seen occasionally in America, but not in epidemic form. Treatment by salvarsan is said to be successful in some cases.

Respiration **710**

The act of breathing. It consists of two movements: Inspiration or drawing-in of the the air, and expiration or expelling of the air after it has undergone some modification. The difference between inspired air and expired air is that the former contains more oxygen and less carbonic acid than the latter.

There are several types of respiration. That known as abdominal in which the diaphragm—the membrane which forms a dividing line between the chest and abdominal cavities plays the principal part is more common in men, whereas costal respiration in which the chest movement is predominant is more common in women.

The respiratory act takes place normally about 16 times per minute. We speak of accelerated respiration when this number is largely increased. This is as a rule the case in all-feverish conditions.

Rheumatism and Rheumatic Diseases **711—712**

The term "rheumatism" is used

indiscriminately for a number of conditions of ill-health which are really not rheumatism at all, but the word is a favourite expression and denotes almost every kind of pain especially round or near a joint.

We distinguish a number of forms of rheumatism. There is first that known as "acute rheumatism" or "rheumatic fever." It is a serious disease which in the opinion of some is due to microbial infection, though many others do not think so. The principal symptoms of acute rheumatism are feverishness and pain in one or more joints. The latter are red and swollen and frequently one joint gets better whilst another is attacked. The joints more frequently affected are the knees, ankles, wrists, shoulders, and elbows; the hip in most cases remains free.

Nearly all the organs of the body suffer in the course of an attack of acute rheumatism, and the patient is generally exceedingly weak and prostrate. The perspiration is profuse and has a peculiar sour smell.

There is a diminution in the secretion of urine which is high-coloured and contains an excess of uric acid and urates.

Fortunately, acute rheumatism is amenable to treatment. Sodium salicylate, or its various modifications, including aspirin, helicon, saloi, etc., bring about a diminution in the symptoms almost instantaneously. They all have nearly the same dosage, the average being about ten grains; some are more liable to cause disagreeable complications than others. The patient must be kept in bed and between blankets. The affected joints should be wrapt in wool or flannel. The diet to be plain and erring on the side of restriction.

The great danger in acute rheumatism is the frequency with which the heart becomes affected. Indeed, acute rheumatism is responsible for the majority of cases of valvular heart disease. This danger can best be avoided by rest in bed during and after the atack of rheumatism.

Among other complications which may occur are high fever, pneumonia, pleurisy, eruptions on the skin and cerebral manifestations.

712. In a large number of cases the symptoms described under "acute rheumatism" do not run such a severe course. The feverishness is either absent altogether or very mild. Only one joint is painful, or the pain in several joints is moderate and felt only after exertion. Or the pain comes and goes at various times. The joints are visibly not affected at all, or they crack on movement. The general health is but slightly impaired or markedly bad.

For these cases it is exceedingly difficult to find a correct name, and there is great diversity of opinion among doctors on the subject. Some use the term "sub-acute rheumatism," others "chronic rheumatism," others "rheumatic diathesis," "chronic synovitis," and so on. In many instances the joints become eventually deformed or otherwise outwardly affected. These are the cases known as "rheumatoid arthritis," and their treatment is by no means satisfactory. Fairly good results may be obtained from painting the joints with tincture of iodine and from hot applications including super-heated baths. The milder cases of chronic rheumatism derive benefit from Turkish baths, massage, galvanism, and the internal administration of potassium iodide, or arsenic. In cases of threatened rheumatoid arthritis it is advisable to use the joint gently and passively so as to prevent stiffness.

Frequent visits to spas such as Buxton help to keep the symptoms in check.

Those who incline to rheumatic diseases should avoid exposure to cold or draughts. They should wear flannel next to the skin, and avoid rich foods. intoxicants, tea, and coffee.

Rheumatism in the sense of disease of the joints is a frequent result or complication of infectious diseases, including pneumonia, scarlet fever, etc. (*See* Index for the various headings under which "Rheumatism" is mentioned.)

Ribs, Fracture of **713**

This is a frequent accident frequently overlooked, and one comes across occasionally cases of fractured ribs which have been looked upon for months as muscular rheumatism.

The accident may happen not only through actual violence, such as a kick or a fall, but also through compression of the chest in a crowd and by muscular strain, for instance, in a severe fit of coughing.

The treatment consists in fixing the chest by means of broad bandages or overlapping wide strips of adhesive plaster. If there are any complications affecting the lungs they must be treated accordingly.

Rickets (Rachitis) **714**

Rickets is a children's disease which is characterised by general ill-development of the body, and especially by softening and deformity of the bones.

The chief, if not the only, cause of rickets is now generally admitted to lie in the absence of vitamins (*see under* "Beri-Beri") from the food given to the affected children. Where they are breast-fed the cause lies in the mother's diet being deficient in vitamins.

The symptoms of rickets are usually noticeable from an early age. There is excessive sweating about the head, which is square and large. The "fontanelles" or membranous coverings of the cavities on the top of the skull which should be hard by the time the child is three or four years old are soft and flabby. There is extreme sensitiveness to touch. The abdomen is enlarged and the ribs present a series of beads or swellings in the front part of the chest (rosary of rickets). The ends of the bones near the ankles and wrists are also swollen and the bones themselves, especially of the legs, show signs of bending.

Children with rickets are generally backward as regards teething, walking and talking, and they are often subject to "laryngismus stridulus" or "false croup"—a complication described under the heading "Croup." They also suffer very often from convulsions, cramps, and other more or less serious complications of which bronchitis is the most frequent. Eventually the disease leads to such conditions as knock-knee, bow-legs, flat-foot, pigeon-chest, curvature of the spine, etc.

The treatment of rickets is really one of prevention. Proper feeding and plenty of fresh air and sunshine are absolutely necessary if rickets is to be prevented. Where there are early signs of it, cream, emulsion of cod-liver oil and meat gravy form very important remedies. Deformities must be treated by suitable appliances or surgical operations. Infants with a tendency to rickets should not be encouraged or allowed to stand or walk.

Ringworm **715—716**

Under this name are included various forms of a contagious disease which affects the scalp or other hair-

covered parts of the skin as well as non-hairy parts. The infective parasite belongs to the vegetable kingdom.

Ringworm of the scalp (*Tinea Tonsurans*), the scourge of our public elementary schools, is generally transferred from one child to another through interchange of caps or other wearing apparel or through the use of common hair-brushes, combs, or towels.

It begins, as a rule, in the form of a small patch on which the hair is thinner and more brittle than elsewhere. This patch grows at the circumference, becoming rounder and larger. At the same time other patches form in the neighbourhood. Gradually the scalp shows several bare places which are red and a little swollen or covered with crusts. The nearest glands often become enlarged and painful. In extreme cases the whole scalp may thus become inflamed and denuded.

The disease may last for years, but in most cases recovery takes place eventually.

Ringworm also attacks the skin in various parts of the body where it forms similar circular patches (*Tinea circinata*). In adults the beard is often the seat of ringworm (*Tinea sycosis*), and also the nails.

716. The treatment of ringworm must be carried out with the greatest persistence as it takes sometimes months to get the upper hand of it. The hair should be cut short, and all crusts removed by soaking them with oil and washing them off. In the case of girls, it is sometimes sufficient to cut the hair short for an inch or two round the patch. All diseased hairs should be singed with a burning taper or pulled out with pincers as far as it is possible.

It is then easier to apply the remedy. Sulphur ointment, one drachm to the ounce in strength, is frequently very efficient. Where it is not, glycerine of carbolic acid is usually applied with good results. Other favourite remedies are tincture of iodine, white precipitate ointment, etc. Whichever is used, it must be used with perseverance.

The X-rays are now employed in the treatment of ringworm with considerable success.

Precautions must be taken against the infection of other children. In some places there are special schools for children with ringworm.

The treatment of ringworm in adults is practically on the same lines. (*See also under* "Barber's Rash.")

Rodent Ulcer 717

A form of superficial cancer of the skin almost always situated on the upper part of the face and on the forehead near and round the eye. It generally attacks old people and begins as a small nodule which soon turns into an ulcer. The latter grows and assumes an irregular shape though sometimes it is quite round; it eats into the skin and the flesh underneath, but the pain is slight or absent altogether. The disease is very chronic and it may end fatally through hæmorrhage or by attacking vital organs.

Rodent ulcer is certainly the least dangerous of all forms of cancer and amenable to treatment, which formerly consisted in removal of the ulcer by the knife or by caustics, but is now almost entirely superseded by exposure to the X-rays or the influence of radium. The Finsen light, carbon dioxide snow and electric ionization

are also much used in cases of rodent ulcer with great success.

Rumination (Merycism) 718

Some neurasthenic or hysterical persons regurgitate swallowed food like ruminant animals. The phenomenon, known as rumination, is rare and is sometimes exercised at will. It is also present in some insane patients. Treatment is hardly ever called for unless it be for the general condition which gives rise to it. If there are no other symptoms there need be no anxiety.

Salivation, Disorders of 719

An excessive secretion of saliva (Ptyalism) is seen in inflamed conditions of the mouth and tongue. It is a frequent symptom of pregnancy. It occurs in many cases of indigestion or neuralgia. The prolonged administration of some drugs like mercury, or iodine, causes very often excessive salivation. Mental excitement may also produce it, though it may also have an opposite effect and arrest the salivation altogether. Finally, excessive salivation is a common symptom in insane, epileptic, and paralytic patients.

The treatment must be directed to that of the cause. As a palliative, potassium chlorate either in the form of a mouth-wash, one or two per cent. strong, or in that of tablets allowed to dissolve in the mouth, will be found serviceable. Also gargling with dilute glycerine of alum.

More potent remedies, such as tincture of belladonna in 5 or 10-drop doses two or three times daily, may be needed in severe cases, but they should only be taken on a doctor's prescription.

The opposite condition of dryness of the mouth through insufficient salivation is described under "Mouth, Diseases of."

I may add here that condiments like ginger, horse-radish, pepper, etc., contribute materially to the secretion of saliva.

It is also of interest to mention that saliva is an important factor in the process of digestion, its object being to transform starches into soluble sugars as well as to facilitate swallowing.

Scalp, Diseases of 720

In addition to wounds and injuries the scalp is subject to a number of diseases, including abscess, alopecia, erysipelas, sebaceous cyst, ringworm, etc., most of which will be found discussed under their respective headings.

Wounds on the scalp heal, as a rule, rapidly owing to the plentiful blood supply, but unless scrupulous antisepsis is observed they are liable to become septic.

Scarlet Fever (Scarlatina) 721—722

The distinguishing features of scarlet fever are its sudden onset with chilliness, vomiting, and a high temperature, the appearance of the rash on the chest first, generally on the second day, and the greater liability to serious complications on the part of the throat and tonsils which are very much inflamed.

It is sometimes difficult to tell whether a given case is one of measles, scarlet fever, or German measles.

Scarlet fever is a highly contagious disease, though the actual microbe has not yet been isolated. It is supposed that the infection takes place through the medium of milk or through actual contact with a person who has himself had scarlet fever, or been in contact

with someone suffering from it. The danger of infection on the part of one with scarlet fever exists as long as the skin has not yet peeled off or is peeling off during the stage of convalescence.

The period of incubation is from one to five or six days, sometimes longer. It takes about six or seven days for the illness to subside. The temperature falls and the peeling process commences, lasting about a fortnight, though it may go on for several weeks.

The scarlet rash consists of a number of bright-red spots. Hardly any part escapes, with the exception perhaps of the scalp and corners of the mouth. The so-called "strawberry tongue" is a most characteristic symptom. Once seen, it can never be mistaken.

722. In some epidemics of scarlet fever the disease is exceptionally mild, in others, it is exceptionally severe with a large rate of mortality. Of late years we have not had very severe forms in England.

In the severe cases there are complications on the part of the kidneys, which may lead to Bright's disease, on the part of the heart which may remain more or less permanent, in the ears which may leave deafness behind, and also in various other organs.

Whilst it is usual for one attack of scarlet fever to render the individual immune against subsequent attacks, second and even third attacks are by no means unknown in children as well as in adults.

Scarlet fever is commonest in children between the ages of five and ten. It is more prevalent in the late autumn and early spring.

Scarlet fever and diphtheria are not infrequently present together.

In rare cases the peeling is so slight as to be almost insignificant.

The treatment of scarlet fever is like that of all feverish diseases. Rest in bed with isolation in order to prevent spread of the infection as much as possible. Liquid light diet. Well-ventilated room with the minimum of hangings and furniture. Daily sponging with lukewarm water. Cleansing of the nose and throat with an antiseptic solution. Small pieces of ice to combat the high temperature. Quinine in half-grain doses or some other similar drug, as prescribed by the doctor in attendance. Careful and prolonged convalescence.

Scarlet fever must be notified to the medical officer of health. If the patient is not removed to a fever hospital, a sheet wrung out of some antiseptic solution, like carbolic acid should be hung over all doors, especially of rooms in which there are other children.

All clothes, bedding, etc., as well as the room of the patient, must be thoroughly disinfected before they can be used again with safety.

Sciatica 723—724

This painful and well-known affection derives its name from the fact that it is a neuralgia of the sciatic nerve, the largest nerve in the body, which supplies almost all the structures of the thigh, leg and foot.

The causes of sciatica are many. It may be a manifestation of gout or rheumatism, it may result from exposure to wet and cold, for instance, through sitting on a damp seat or on the ground, or through being in a draught; sometimes over-fatigue and particularly prolonged standing leads eventually to sciatica; other causes owe their existence to compression of the sciatic nerve, either in the pelvis by a tumour in the neighbourhood or

outside, as, for instance, through excessive cycling. Tight boots have been known to cause sciatica by pressing against the nerves of the foot. Sometimes the sciatica is a symptom of some other constitutional disease besides gout and rheumatism, as, for instance, syphilis, chronic alcoholism, diabetes and anæmia.

Very often the cause remains obscure and can only be guessed at.

724. The signs of sciatica are pain along a line at the back of the thigh and down the leg into the foot. The pain is spoken of as shooting, darting, tingling or burning; it comes on in paroxysmal attacks with free intervals or it may go on continuously without abating and be aggravated by attempts at movement. In one or more definite spots the pain is increased by pressure with the finger, these spots being particularly tender to the touch. They are called "points douloureux" and are situated principally at the back of the hip, behind the knee, on the outer side of the knee and on the outer side of the ankle. The leg also feels numb, tingling and more or less stiff.

When lying down, the symptoms are far less acute than in the standing position or the pain is absent altogether.

There are, of course, various degrees of sciatica from occasional mild twitchings to constant and agonising pain which lasts for weeks or months. In these severe cases, the sufferer can hardly get up from his bed and the muscles show signs of wasting. In other cases an improvement is obtained by appropriate treatment, but relapses are frequent.

The treatment of sciatica is like that of neuralgia in general. (*See under* "Neuralgia and Neuritis.") Obstinate cases derive benefit from a course of electricity or from the baths of Buxton, Harrogate or Droitwich. Quite recently excellent results have been obtained from the application of incandescent light, a portable lamp covered with a bright, polished metal hood being swayed backwards and forwards over the affected part for about twenty minutes. The necessary caution must be observed to guard against burns, but those who have used the method urge that the light should be applied direct to the skin.

Some cases are so severe that no other treatment promises success but a surgical operation consisting of either stretching the nerve or excising portions of it.

Sclerodermia (Morphea) 725

Hardening of the skin in large round or irregular patches, pinkish or white in colour. When over joints, the latter may be rendered quite useless. A rare form occurs in newly-born children among the poor and is known as sclerema neonatorum. The treatment consists in placing the child in an incubator or otherwise applying warmth, but the outlook is not favourable.

In adults the disease is chronic and of long duration. Turkish baths, hot packs, and the use of emollient ointments or warm oil afford some relief. In the case of young women they should also take internally tonics containing iron and arsenic, cod-liver oil, etc.

Sclerosis, Disseminated 726

Disseminated or multiple sclerosis is a degenerative disease of the brain and spinal cord of which the symptoms are muscular weakness and trembling when attempting to do some such action as threading a needle (intention

tremor), scanning or staccato speech, nystagmus, a waddling gait, pain in the back, and some mental impairment.

The disease may arise from injuries, metallic poisoning, etc. It is extremely chronic and may last for many years.

Scrofula **727**

The term is not used as often as in former times. It refers chiefly to swollen glands in the region of the neck which are at the present time regarded as a manifestation of tuberculosis. Other signs of scrofula are eruptions on the skin, persistent swelling of the lips and eyelids, nasal catarrh, and more or less general weakness. The treatment is like that mentioned under "Tuberculosis."

Scrofula is still spoken of as the "King's Evil" on account of the old superstition that it is curable by the touch of one who wears a crown. Nowadays it is generally referred to as tuberculous adenitis, or struma.

Scurvy **728**

Scurvy or scorbutus is generally the accompaniment of war, shipwreck, and famine. It has been proved over and over again that the chief cause of scurvy lies in the absence of fresh vegetable food, combined with excessive consumption of salted meats. Many expeditions to unknown regions have come to grief through scurvy, but since explorers have begun to understand its causes it has now become very much rarer than it used to be.

The symptoms of scurvy are general debility, large patches on the skin, resembling bruises, chiefly on the thighs and legs, bleeding and swelling of the gums, and a sallow complexion.

It is plain from what I have said that the treatment of scurvy is mainly dietetic and calculated to make good the loss of vegetable food. As preventives of scurvy fresh lime-juice and lemon-juice have no equals. They are used very largely by the men of the British Royal Navy, and with excellent results. Onions, too, are considered an excellent preventive of scurvy.

There is a form of scurvy which affects sometimes little children brought up on artificial foods and which is known as "Barlow's disease," or infantile scurvy. It is really a kind of rickets so that the treatment is practically the same as in the latter condition. But the first essential is substitution of the foods used by fresh cow's milk, pure and unboiled.

Scurvy is now reckoned among the so-called "Diseases of Deficiency," which include rickets and beri-beri, and of which the cause lies in absence of vitamins from the diet. (*See under* "Beri-Beri.")

Sea-Air and Sea-Bathing **729**

In many conditions of ill-health, a stay at the seaside combined with sea-bathing is an excellent method of treatment, but on the other hand it seems to disagree with a great number of people.

Persons suffering from heart disease or disease of the lungs, those subject to epileptic fits and those whose abdominal organs are not healthy should not bathe in the open sea. Old people, and persons generally feeble and delicate or recovering from acute diseases, may do so only on very warm days and when the sea is very quiet.

Sea-bathing is beneficial in the case of those who incline to excessive perspiration or who are liable to catch cold easily, as it acts as a tonic to the skin.

Residence at the seaside is the best

remedy for scrofulous and delicate children. Neurasthenics derive great and immediate benefit from sea air or sea voyages, but sea-bathing is if anything rather injurious to them.

Rheumatic diseases as a rule are aggravated by sea-air and sea-bathing. In rare cases of muscular rheumatism a moderate amount of sea-bathing may do good.

In choosing a watering-place for one who is an invalid it is advisable to select one which is well sheltered against strong winds. Bournemouth is one of the finest seaside places for the purpose, because it is sheltered by surrounding hills as well as by extensive pine-woods. On the whole, the south coast is preferable to the others round the British islands, though a number of people regard it as relaxing and enervating.

Sea-Sickness **730—731**

This universal malady is too well known to need description. Few people who have ever been on the sea have not experienced the trio of distressing symptoms which constitute the disease, namely the sickness, dizziness and prostration. It is hard to say which is the worst.

In spite of all theories to the contrary, there can be no doubt that sea-sickness is produced by the rolling and motion of the ship in persons who have not become accustomed to this method of locomotion and who are perhaps subject to nervous or gastric disturbances.

Under the circumstances it is not surprising that a fortune is still awaiting the discoverer of an infallible remedy against sea-sickness, though there are many who claim universal success for their favourite treatment. It is probable that sea-sickness will be conquered only when the motion of the ship will have been reduced to an insignificant minimum. This being at the present day hardly realisable the remedies in existence are meant to calm the nervous system and to strengthen it against the shock caused by the unaccustomed movements. In some people this can be achieved by one drug, in others by another, but it cannot be said that the same remedy is efficient in every case. Of the older ones, potassium bromide in fairly large doses—15 to 20 grains—still holds the field. As a preparation for long sea voyages it is recommended that it should be taken in 10 or 20gr. doses, three times daily, in water after food, for two or three days previous to sailing, along with a very plain diet and attention to the bowels. In some cases the ammonium bromide—in the same doses—answers better than the potassium salt. Of the more recent drugs veronal-sodium in 5-grain doses, chloretone in 10-grain doses and validol in 10 or 15 drops on a lump of sugar, repeated hourly if necessary, are of effective service.

731. As to other remedies, there are some who swear by iced champagne, others by a mustard-poultice to the pit of the stomach. Many victims feel better when in a recumbent position, others prefer to sit up. Some like to have their clothes loose, others prefer a tight bandage round the abdomen.

I can only refer briefly to the very distressing cases of continuous sea-sickness in long voyages which require morphine injections or other measures at the hands of the ship doctor. They form almost a separate disease, with, sometimes, calamitous results.

This is also an opportune occasion to mention the discomfort experienced by many people when travelling by train

or electric car and which resembles sea-sickness in almost every particular except that it is seldom so severe as the latter. It is spoken of as "train and car sickness," and seems to affect particularly those who are subject to eye-strain through defective eyesight. Women about to go, or going through the change of life also complain frequently in this respect.

As to treatment, it is the same as in sea-sickness, though the doses of the drugs employed need not be so large.

Sebaceous Cyst 732

By this name we call the swellings which occur frequently on the scalp or face, occasionally also on the back and shoulders, and which are little sacs containing fluid or semi-fluid matter. They are generally round, fluctuating, and movable, cause little or no pain but are apt to grow to large dimensions or turn into abscesses. The treatment is by the surgeon's knife, or by electrolysis.

Seborrhœa 733

This means a disturbance in the sebaceous—or fat-producing—glands of the skin, which results in an increase of the secretion so that the skin is always greasy and, through taking up particles of dust, more or less dirty and covered with blackheads. One form of seborrhœa, that of the scalp, is known as dandruff, and will be found discussed under that heading. We also distinguish an oily form of seborrhœa (S. oleosa) and a dry one (S. sicca). In the former the pores of the skin, especially on the nose and on the forehead, seem to ooze out drops of oil; in the latter the skin or scalp is covered with scales.

The treatment is described under "Dandruff." The parts affected must be washed frequently with soap and water, after which the ointment or lotion can be applied. Repeated sponging with weak vinegar or eau de Cologne will cure some of the milder cases; soap liniment is useful in others.

Senility, Premature, and Normal 734

One sees sometimes in young people signs of general decay similar to those of old age, without being able to explain them except by assuming some hereditary influence. In other cases such a decay follows upon a long and exhausting illness or a life of debauchery.

After the age of seventy, the changes due to senile degeneration of the various organs must be regarded as something normal, and the attempts to produce a life-elixir or rejuvenating remedies are but idle dreams. The secret of long life lies in the avoidance of excesses at a time when they are not felt.

The much-discussed operation of introducing monkey's and other glands into the human system for the purpose of rejuvenation is as yet in the experimental stage and, on the whole, received with incredulity by the medical profession.

Septicæmia and Pyæmia 735—736

Septicæmia or septic blood-poisoning is an infectious disease due to inoculation with poisonous substances —including bacteria—which entering into the blood circulation multiply enormously and give rise to serious symptoms, often of a fatal nature.

The poison generally proceeds from some infected source either directly or through the medium of unclean instruments or utensils, and the usual entrance into the system is through some open wound.

The symptoms of septicæmia may not appear until some days after the wound had been received or they may set in immediately. They begin with a chill and rise of temperature which keeps increasing and remains high, being highest in the evening—up to 105 degrees or more. Shivering fits are common. The pulse is very rapid and thin, so that it can hardly be counted. The patient is delirious or listless and apathetic and is always picking at the bedclothes. The tongue is dry and red and there are cracks at the corners of the mouth, the lips being covered with crusts. Hæmorrhagic patches may appear on the skin, and there may be some jaundice. The urine is diminished in quantity, high-coloured, and may contain albumen. The wound itself assumes the character of erysipelas, being more or less inflamed and discharging pus. The lymphatic vessels show like red lines along the skin. The nearest glands are swollen and painful or they turn into abscesses. The veins may become blocked with coagulated blood —thrombosis—and whole limbs may become gangrenous.

736. If in addition abscesses develop in other and distant parts—away from the seat of injury—including the lungs, kidneys or liver, etc., the condition is spoken of as pyæmia or septico-pyæmia. It is almost always fatal, though it may run on for weeks and months.

Septicæmia and pyæmia used to be common in pre-antiseptic days, but at any rate in connection with surgical operations they are now very rare. Doctors are liable to be attacked when, lancing a septic abscess, they are unfortunate enough to prick themselves or be otherwise injured, thus effecting an entrance for the deadly bacteria. Many of them have lost their lives in this way.

Hence the great necessity of carefulness and antisepsis. Even the slightest wound should be disinfected immediately. When once the disease has made its appearance and it is too late to arrest its progress, an operation, the extent of which may vary from an incision to the amputation of a whole limb, is the only possible way of saving the life, if it can be saved at all.

Milder cases amounting to no more than inflammation of greater or lesser extent are treated according to the circumstances. Where recovery takes place convalescence requires tonics and good nourishment.

Shock 737

The medical significance of this term, which is frequently used apart from its ordinary meaning, is a sudden depression of the vital functions, due to physical injury or intense mental emotion. As examples, we may quote shock from an accident, including contact with a "live" electric wire, a serious operation, terror, or bad news. That shock frequently has a fatal termination is well known. Sometimes the result is a long and lingering illness.

The first thing to do in a case of shock is to make the patient lie down, to apply external warmth by means of hot water-bottles, etc., and then to administer some stimulant, whilst the doctor is being fetched. (*See under* "Thyroid Gland, Diseases of.")

Shortness of Breath 738

This is never a disease by itself, but a symptom of a number of diseases which will be found discussed under various headings. The most frequent of them are, anæmia, asthma, heart

disease, pleurisy, consumption, other lung diseases, and general weakness.

Shyness **739**

Though it is not usual to regard shyness as a disease in the strict sense of the term, those who are subject to it are frequently sufferers to an inordinate extent, if not perhaps physically at any rate mentally. Cases are by no means unknown of persons who have been driven to suicide through excessive and most uncontrollable shyness, though fortunately such extreme instances are rare. It is hardly necessary to describe shyness, its symptoms are well known. Sometimes it is merely the outward manifestation of a timid nature or an excitable temperament. The treatment must therefore be directed to the removal of the cause and the sufferer should do all he can to divert his attention into other channels. The pursuit of some hobby, physical exercise, suitable recreation and amusement will do far more good than drugs and tonics, though the latter are sometimes a valuable help.

Temporary attacks of shyness including what is known as "stage fright" may be prevented by small doses of potassium bromide—say 5 grains, taken half an hour or an hour before the dreaded occasion. In this category one can include the nervousness which seizes some people when they have to stand up and address an audience. Validol also—as mentioned under "Blushing" (which see)—is of great service in this respect.

Skin Diseases **740**

Diseases of the skin—including the scalp—are amongst the most troublesome affections we are subject to, and they often necessitate the greatest amount of patience and perseverance of treatment.

Most of them will be found mentioned under various headings, including acne, boils, eczema, drug eruptions, itch, psoriasis, ringworm, etc. (*See* Index.) All I wish to say here is that a variation in the method of treatment is seldom beneficial in skin diseases. The better way is to continue with the same treatment, without becoming despondent or hopeless, until an improvement shows itself—unless there is actually an aggravation of the symptoms.

Another mistake often committed is to leave off treatment when there is some improvement noticed. The symptoms soon return and perhaps in a worse form. It is safer to continue the treatment longer than necessary rather than run the risk of stopping it prematurely.

Ointments are best applied spread on pieces of lint instead of directly on the skin. The best way to apply lotions is to place the lint on the skin, and pour the lotion over it until it is fully saturated. This is to be repeated when the lint has become dry.

Many chronic skin diseases improve rapidly by the use of baths. (*See under* "Baths in common use.") Some spas, for instance Harrogate and Strathpeffer in this country, and Luchon in France enjoy a special reputation with regard to the cure of skin diseases.

Persons with delicate skins should be careful what soaps they use. It is often possible to regain a smooth and elastic complexion by the employment of a superfatted or neutral soap, or by discarding soap altogether and washing the face with thin gruel, or thin oatmeal and water. Sometimes the explanation of a chronic skin disease lies in the hardness of the water used. In that case the water should be

boiled first and then allowed to cool.

It is also worth knowing that skin diseases are sometimes the result of indigestion, mental trouble, or want of rest. Rest and change of air are then generally of great benefit.

Following injuries or diseases of the skin, there sometimes remain upon it patches of a peculiar shining character. The condition is known as "glossy skin."

Skin-Grafting **741**

The operation of skin-grafting, which is resorted to when a diseased or injured part of the surface refuses to heal by ordinary remedies, consists in the application of pieces of healthy skin derived either from the patient himself, from some other person, or from some animal, such as a rabbit, guinea pig, the inner membrane of a hen's egg, and so on.

Skull, Diseases and Injuries of **742**

The bones constituting the skull are subject to the same diseases, malformations and tumours as bones in other parts. Meningocele and encephalocele —known also as hernia of the brain— are congenital tumours consisting of brain membranes or brain substance which have protruded through some part of the skull which has not become ossified. It is better to leave them alone, though an operation may be advisable in individual cases.

Of injuries to the skull, fracture of the base of the skull is one of the most frequent causes of accidental death. The signs are generally the escape of blood or cerebro-spinal fluid from the ear, nose or mouth, unconsciousness and symptoms of paralysis. At the same time the eyes appear bloodshot. It is useful to remember that a case of fracture of the base of the skull looks very much like an attack of acute alcoholism, and mistakes in this sense are made over and over again.

Surgical operations on the skull are often performed in cases of abscess, tumour, injury, idiocy, etc. Perhaps the most common is that known as trephining, which means cutting out a circular piece of bone from the skull with an instrument described as a trephine. The relief thus effected in the pressure upon the brain is often of immediate and lasting benefit.

Sleep, Disorders of **743—746**

Apart from insomnia, with which I have dealt under a separate heading, the function of sleep is liable to several disorders. There is, first, that known as excessive sleep, which is a frequent phenomenon in demented persons, though it may occur in healthy people after a spell of exhaustive work with insufficient rest and food. It also occurs occasionally, as an independent and somewhat mysterious condition, the person in question being asleep for days, weeks, or even months. These cases are regarded as "nervous" in their nature and not unlike a cataleptic trance.

The disease known as "sleeping sickness," or "negro lethargy," which is very prevalent in tropical countries, especially on the West Coast of Africa, is now known to be due to the presence of certain parasites in the blood (trypanosome, hence the more technical name of the disease, trypanosomiasis). It is an extremely fatal illness and often destructive of whole villages and communities. Some new remedies have recently been introduced for the treatment of "sleeping sickness" from which good results are anticipated; but more satisfactory effects have been obtained from pre-

ventive measures which include the provision of fly-proof houses (it being fairly well established that the infection is carried by tse-tse flies) suitable clothing of white material, precautionary injections of mercurial or arsenical preparations. (*See under* "Paralysis.")

Kala-azar is a similar tropical disease of which there are several varieties, and of which the main symptoms are an enlarged spleen and long continued pyrexia, which ends, as a rule, fatally.

The somnolence of which some people complain, especially after meals, is caused by a comparative deficiency of blood in the brain, and is not, as a rule, a serious symptom, though it may be due to neurasthenia. The remedy is to take a light meal in the middle of the day and the principal meal towards the evening.

744. There are several other disturbed conditions of sleep. A very common one is that known as "nightmare," generally occurring in the middle of the night. There is a feeling of weight on the chest, accompanied by oppressive dreams which frequently cause the sleeper to wake in a fright or to scream aloud.

Whilst the condition is in most cases due to a heavy, late, or indigestible meal, the cause is sometimes to be found in exhaustive brain-work or in physical over-fatigue, especially in persons of a nervous temperament. It is also to be noted that "nightmare" often precedes an outbreak of delirium tremens in alcoholic subjects. (*See also under* "Nightmare and Night-terrors.")

Disturbed sleep, almost, if not quite so pronounced as nightmare, is apt to occur under various conditions, including mental excitement, neuralgic pain, discomfort from severe cold or heat, the change of life in women, etc. Sometimes sleep is restless through tea-drinking or owing to a change of surroundings.

Apart from endeavouring to remove the cause of the disturbed sleep, the treatment by drugs is the same as mentioned under "Insomnia."

745. We also consider as disorders of sleep the conditions known as "sleep-talking" and "sleep-walking" (somnambulism). In both of these, the sleeper appears to possess singular powers in calling into activity functions normally suppressed during sleep. Indeed sometimes these powers surpass anything the individual can do during his waking state. The cause of these phenomena is not quite understood, but it has some connection with the function of the brain.

Sometimes somnambulism is either a symptom or a manifestation of epilepsy or hysteria, and then the treatment must be directed towards the causative condition. In many other cases it is sufficient to attend to and sustain the general health by suitable food and tonics.

746. Many people complain of excessive snoring—or, at least, others complain who are compelled to sleep in the same bed or room with them, or on the other side of a thin wall or partition. There is really no remedy against it, but I have often successfully advised under such circumstances sleeping with the head as elevated as possible, and lying on one side, never on the back.

Snoring, especially in children, is frequently a sign or adenoids or of an elongulated uvula. It may be a part symptom of chronic catarrh or due to some obstruction in the nose which

prevents breathing. Then, of course, there is the stertorous snoring accompanying attacks of drunkenness, or serious illnesses, like apoplexy. The treatment in such cases will naturally depend upon the cause.

Smallpox (Variola) 747—748

I will not enter here into the controversial question whether vaccination is accountable for the rarity of smallpox at the present day. Personally, I am convinced it is; but be this as it may, the fact remains that to all intents and purposes, smallpox is one of the diseases which modern measures have stamped out. Very few doctors ever see a case of smallpox now, and the slight epidemics which break out occasionally are generally nipped in the bud by the adoption of suitable precautions, including re-vaccination, isolation, disinfection, etc.

But still, cases of smallpox are not altogether unknown, and medical officers are always on the alert.

There are several forms of smallpox. That known as "discrete" is the least serious. It begins, as a rule, with feverishness and shivering fits, headache, pain in the back, sickness, and profuse perspiration. This is followed on the third or fourth day by an eruption on the face, forehead and wrists, the other parts of the body remaining almost free. The disease lasts from four to five weeks, the period of incubation being from seven to fourteen days.

Some of the pimples change into pustules, which remain apart from one another, and which, after bursting, dry up and form scabs. At this stage the patient becomes convalescent, and pitting ensues, leaving permanent marks. These may, to some extent, be prevented by the application of cold cream, glycerine, vaseline, lint soaked in a solution of perchloride of mercury, one in three thousand, or tincture of iodine.

The more serious forms of smallpox, known as "confluent," "hæmorrhagic," and "malignant," are much more serious than the "discrete." In the confluent, the vesicles run into one another, especially on the face, which is completely swollen and presents the appearance of a tense, elastic mass. The eyelids are almost closed up, the glands are swollen in the neck and the lower jaw, and the fever is accompanied by more or less severe delirium. The eruption spreads all over the body and assumes in many cases the hæmorrhagic form, blood appearing in a large number of the vesicles. The outlook becomes very grave, about half the number of patients thus affected succumbing on the eleventh or twelfth day from the beginning of the illness.

748. The malignant form, which is also known as "black smallpox," is the most dangerous, being fatal in practically every case. The characteristic symptoms are extreme pain in the back and coldness in the extremities. About the third or fourth day the eruption appears almost all over the body, looking more like a scarlet fever rash covered with deep blue or black spots. The course of the illness is very rapid, death occurring in from three to four days. Malignant smallpox is extremely rare in persons who have been vaccinated or re-vaccinated.

Mild forms of smallpox occur occasionally in those who have been vaccinated, or who have already had one attack of smallpox, but as a rule such

persons remain immune for very long periods.

Children under five who have not been vaccinated appear to be liable to the most fatal forms of smallpox. Between the ages of ten and fifteen the mortality is about the lowest; in infants under one year of age smallpox is almost invariably fatal. One authority states that generally speaking, unvaccinated persons attacked by smallpox die at the rate of about 50 per cent.; those badly vaccinated about 26 per cent.; and those well vaccinated about 2.3 per cent.

The treatment of an actual case of smallpox resolves itself into good nursing, the combating of serious complications, and the maintenance of the patient's strength by suitable nourishment. It is not in fact different from that of scarlet fever or other feverish diseases.

The vast majority of the medical profession rely upon vaccination and revaccination as the only efficient preventive treatment of smallpox. Whilst welcoming sanitation and other hygienic precautions, they do not consider them sufficient in themselves. It is only fair to add that a small number of doctors do not believe in vaccination.

That smallpox is one of the notifiable diseases it is hardly necessary to mention, the difficulty lies in early diagnosis. This difficulty is, of course, largely absent where there is an epidemic prevalent.

Smell, Disorders of **749**

The sense of smell is subject to various disturbances, including an abnormal acuteness in distinguishing smells, a perverted sense of smell which causes it to perceive imaginary or very disagreeable odours, and a more or less marked absence of the sense of smell, the last-named being the most frequent.

The commonest cause is catarrh of the mucous membrane of the nose, and the longer the duration of the catarrh the more unfavourable the chances of the function of smell being restored. Other causes of the loss of smell are a sharp attack of influenza, excessive snuff-taking, the presence of a polypus in the nose, disease or injury to the nerve supplying the nostrils, and disease of the brain. In old people the loss of the sense of smell is nothing unusual, and sometimes it is the result of a powerful stimulation of the function by a very strong odour, like that of ammonia.

Hysterical females often complain of the loss of smell.

Treatment of the affection is seldom either necessary or effective. Sometimes, especially in recent cases, the application of a blister to the neck is sufficient to bring about a recovery. In other cases, the electric current is very beneficial if applied to the nasal mucous membrane. Frequently the function returns of itself without any treatment. Where the cause is obvious, treatment must be directed towards its removal.

Sneezing, Excessive **750**

Apart from being a sympton of nasal catarrh or hay-fever, sneezing fits, sometimes sufficient to cause alarming exhaustion, occur in hysterical females. Gouty subjects also are frequently liable to sneezing fits, and in some persons they come on as a sign of nervous irritation without any apparent cause.

An attack of excessive sneezing may be arrested by administering an emetic. Or a mustard poultice may be applied to the back of the neck. Inhalation of

iodine or creosote vapour is effective in other cases, and in others, again, good results may be obtained from drawing up into the nostrils some menthol powder or menthol liniment. If none of these remedies succeed, the nostrils may be painted with a 1 per cent. solution of cocaine, or one or two drops of a stronger solution may be sniffed up into the nostrils.

Where the complaint is chronic, the general health should be attended to at the same time. In extreme cases it may become necessary to have recourse to a surgical operation.

Spasms **751**

Spasms are involuntary muscular contractions which may occur in any organ or in any group of muscles. There are, for instance, the spasms in the back of the throat seen in hydrophobia. Colic in the intestines is often nothing else but a spasm. Asthma is a spasm of the bronchial tubes, and so on.

Spasms which last continually for some time are called cramps. Convulsions are spasms which last only a brief time and alternate with momentary relaxations. Chorea or St. Vitus' Dance is in reality a form of spasm and in the same category are included the so-called "habit spasms" of children and young people. (*See* "Chorea.")

Hot applications are generally sufficient to arrest mild spasms. Severer ones require medical assistance, as it may be necessary to administer chloroform or carry out a surgical operation.

(Consult Index for the various forms of Spasms.)

Speech, Disorders of **752**

Of the various speech-defects which come under the notice of doctors, stammering is the most frequent. There are different degrees of stammering. In some cases there is no more than a difficulty to pronounce certain letters or certain combinations of letters. In others there is a tendency to transpose letters or syllables, or a habit of interjecting meaningless sounds between spoken words. In others, again, there is a painful pause between one word and another, or a repetition of a particular literal sound which acts as a sort of check to the flow of words. This forms what is known as "stuttering."

Stammering is seldom seen in young children under the age of four or five. The cause is not easy to discover. In a number of cases it lies in heredity, in others in imitation. Most stammerers, however, are of a more or less nervous disposition, and any kind of excitement is likely to cause an aggravation of the stammering. There are also cases of temporary stammering brought about by illness or other passing causes, such as severe mental emotion.

In the majority of cases, stammering ceases at or about the age of maturity, if not entirely, to a very considerable extent. It is a curious circumstance that there are practically very few females who stammer, the proportion of men to women stammerers being about four or five to one. I am not in a position to say why this should be so.

752a. As to the treatment of stammering, most authorities are agreed that beneficial results can be obtained from educational methods only. The stammerer should be taught or should teach himself to practise slow enunciation of difficult and complicated phrases. He should rather stop and begin again from the beginning,

instead of struggling with the impediment. He should draw into the chest a sufficient supply of air before commencing a fairly long sentence, and he must, above all, learn to keep himself free from excitement and nervousness. Reading aloud, elocution lessons, breathing exercises, and singing are most valuable.

Stammering was a frequent symptom during the great war in shell-shocked service men, and was successfully treated by psycho-therapy.

Other disorders of the speech include the nasal tone due to obstruction in the nose through catarrh or other nasal affections or resulting from abnormalities about the hard or soft palate; the scanning or staccato speech, slow and with every syllable pronounced separately, a symptom of nervous diseases, especially disseminated sclerosis; the "stumbling speech" of general paralytics; the indistinct or mumbling speech through absence of teeth or disease of the tongue, the gasping speech accompanying shortness of breath, etc. (*See also under* "Aphasia," "Deaf-Mutism," etc. Consult Index.)

Spina Bifida **753**

Spina bifida is a rare congenital malformation consisting in a want of development of the vertebral bones, with the result that the spinal cord—or spinal marrow—remains unprotected and bulges out in the form of a tumour. Children born with spina bifida generally show other deformities as well, and their life is but a short one, death occurring within a few days or weeks from their birth, as a rule in convulsions. The cause of the abnormality cannot be stated definitely. Sometimes it appears to be the result of an accident or shock to the mother during pregnancy, or it may rest on a hereditary basis. Nothing can be done in the way of treatment, either preventive or curative.

Spinal Cord, Diseases of **754**

The spinal cord—or spinal marrow—is, roughly speaking, a bundle of nervous fibres situated in the long canal formed by the vertebral column which begin in the brain and are continued by single nerves to the various parts and organs of the body. It is subject to a number of diseases and injuries of a more or less organic nature, of which locomotor ataxy is the most frequent.

Disease of the spinal cord is in almost every instance followed by paralysis, and the nearer to the brain the seat of disease or injury is situated, the more complete the paralysis. The sensation is also absent.

The paralysis may be one-sided only if only one lateral half of the spinal cord is affected or double if the spinal cord is diseased in the whole of its width. This is particularly the case when there is inflammation of the spinal cord (myelitis).

Apart from organic diseses of the spinal cord there are also functional affections, which are really forms of hysteria or neurasthenia. The principal symptoms are coldness and numbness in the limbs and severe general weakness, accompanied or not by various pains and aches. The treatment is not much different than prescribed for "hysteria" and "neurasthenia." (*See also under* "Paralysis," "Sclerosis, Disseminated," etc.)

Spine, Diseases of **755**

As distinct from "spinal cord," we speak of the "spine" or the "spinal column" or the "vertebral column"

when we refer to the vertebral bones in which the spinal cord is encased. These bones are subject to various diseases, the one known as "curvature of the spine" being one of great frequency.

Curvature of the spine is either angular or lateral. The angular form, popularly known as humpback, is as a rule, the result of so-called "spinal caries" or "Pott's disease," a destructive process in the vertebral bones which may be due to general tuberculosis or date its commencement from a slight injury. The only satisfactory treatment of spinal caries, besides the necessary surgical operations is by prolonged rest in the recumbent position and the use of suitable appliances, plaster-of-Paris jackets, etc.

The lateral form of curvature of the spine (scoliosis) is a deformity often seen in children and young persons of a delicate constitution, either as a consequence of rickets or as a result of some mechanical injury of a chronic nature.

Thus many children develop lateral curvature of the spine through sitting in school in a faulty position. Some occupations, too, tend to produce the same defect in young persons whose bones and joints are still in a formative stage, if they have a great deal of stooping to do. The signs of scoliosis are a stooping gait, prominence of the shoulder blades on one side more than on the other, a feeling of weakness in the back and general lassitude. On rubbing the skin over the vertebral column it will be seen that the red line formed is twisted instead of being straight. By the adoption of suitable precautions, including special exercises, it is possible to prevent lateral curvature from occurring at all, or from growing worse where there is a tendency to it. Special braces and appliances are made with that end in view. In older people with pronounced lateral curvature nothing can be done. These remarks apply also to cases in which the general curving of the spinal column is backward (kyphosis) or forward (lordosis) instead of being lateral.

The spine is also subject to numerous injuries, such as sprains, stabs, dislocations, and fractures. They are, as a rule, serious in their results, owing to the spinal cord becoming involved, and require immediate medical attention. The vertebral bone-joints are frequently the seat of rheumatism, like any other joints, the chief symptoms being pain and a kind of cracking or grating when bending or turning the neck from one side to the other.

Inflammation of the vertebral bones (spondylitis) is mostly of tuberculous origin and the forerunner of "Pott's Disease." (*See above.*)

Spleen, Diseases of **756**

Independent diseases of the spleen —which is a large, gland-like structure situated on the left side of the abdomen, and the function of which is supposed to be connected with the formation of blood—are rare, and the only one which is fairly frequent is enlargement. (*See under* "Thyroid Gland, Diseases of.")

This is generally the result of some infectious disease, like enteric fever or malaria. In these illnesses, the spleen attains sometimes very large dimensions, and there is always the danger of internal hæmorrhage occurring through the rupture of such a swollen spleen.

The treatment of diseases of the spleen is generally of a surgical nature. The spleen may be removed

without any danger to life as in its absence its function is apparently carried out by the lymphatic glands and the marrow in the bones.

The spleen frequently drops downwards through relaxation of the ligaments which hold it in position, thus forming part of the condition known as splanchnoptosis or displacement downwards of the abdominal organs including the stomach, intestines, kidneys, liver and spleen. This condition is generally corrected by the wearing of suitable belts and bandages, or in serious cases by appropriate operations.

Sprains **757**

Sprains are generally the result of a violent wrench or twist of a joint, as a result of which there is a stretching or partial rupture of the ligaments. They occur most frequently in the ankle, shoulder, wrist, and knee.

The signs of a sprain are severe pain, which is increased on movement, inability to bear weight on the limb, swelling round the joint, and some inflammation. Where the two last symptoms are very marked, it is sometimes difficult to distinguish a sprain from a fracture or dislocation; it is then always safer to regard the injury as a fracture.

A neglected sprain may cause symptoms not unlike those of chronic rheumatism, including stiffness in the joint.

A sprained joint should be placed at perfect rest and supported by wet bandages; after a while stimulating lotions or liniments may be employed and the joint gently moved so as to prevent the occurrence of stiffness. In some cases it is advisable to put the joint in plaster-of-Paris; in others, an elastic bandage is sufficient. Slight cases of stiffness can be benefited by massage; severer ones require surgical manipulation or operations.

Sprue (Hill Diarrhœa, Psilosis) **758**

A chronic catarrhal inflammation of the stomach and intestines of which diarrhœa is the most prominent symptom. It is a tropical disease and prevalent in Ceylon, the Malay Archipelago, Australia, etc. The commencing symptoms are an ulcerated mouth and indigestion.

The cause of the illness is not known but the probability lies in the direction of its being bacillary. The treatment is largely dietetic and the patient should, if at all possible, be sent away to some temperate climate. The diet consists either purely of milk or of milk supplemented by fruit, but individual peculiarities differ much and have to be taken into consideration. A return to an ordinary diet is permitted in gradual stages only. The symptoms as such must be treated on the ordinary lines and laudanum generally arrests the diarrhœa temporarily.

A patient coming home from the East on account of sprue should not think of returning there for at least twelve months, and even after that he will be liable to relapses.

Stature, Anomalies of **759**

Abnormal tallness or shortness—of which giantism and dwarfism are the two extremes—is not necessarily a sign of disease unless accompanied by other symptoms. There are no known means by which the growth of an individual can be influenced in either direction, except that in young people with a history of rickets something may be done by hygienic measures and

a liberal nutrition, including cod-liver oil to assist the natural growing process. Suitable exercises are also helpful, but the idea that stretching the limbs either by the use of weights or otherwise can produce an addition of inches to the height is not only erroneous, but fraught with danger, inasmuch as such treatment may easily cause dislocations or fractures.

Status Lymphaticus (Lymphatism) 760

This term is frequently used in connection with cases of sudden death or death under an anæsthetic during operations. The condition is not quite understood but is associated with an enlargement or persistency of the thymus gland, a structure situated behind the top of the breast bone and normally present during childhood only. A suspicion of status lymphaticus is justified when the patient is anæmic and his tonsils as well as the thyroid gland are enlarged. But even these warnings may be absent and then one is quite powerless in preventing fatal accidents. (*See under* "Thyroid Gland, Diseases of.")

Stomach, Diseases of 761—763

I have already dealt with a number of diseases of the stomach under different headings (*See* Index); there remain a few more which will be discussed here for the sake of convenience.

Ulcer of the stomach is a very frequent disease and as a matter of fact more frequent than is generally believed. It may result as a consequence of chronic gastritis, through injuries by poisonous or irritating substances, or in association with such other diseases as anæmia, Bright's Disease, etc. Pain in the region of the stomach, after food, in a young person, especially a female, must always be looked upon with suspicion as a case of ulcer of the stomach. The pain commences immediately after a meal and lasts for several hours, or until the food has been vomited. By lying down the pain can be eased, as a rule, but sometimes it is experienced more in the back, between and under the shoulder-blades, when relief is obtained by lying on one side or the other. Curiously, the appetite remains unimpaired, but owing to the pain the patients are afraid to eat. Vomiting is not constant, but there is a feeling of sickness and a desire to vomit. The vomited food not infrequently contains streaks of blood; when an attack of blood-vomiting occurs it is, as a rule, pretty severe, and sometimes even alarming or rapidly fatal. This constitutes one of the chief dangerous complications of ulcer of the stomach, the other being a possibility of perforation in the stomach well.

At the first signs of ulcer of the stomach, and especially when hæmorrhage is threatening, the patient should be put to bed and the diet restricted considerably; if necessary, all food must be forbidden, and the patient's strength maintained by rectal enemata. In most cases it is sufficient to give liquid nourishment frequently and in small quantities at a time. Should complications arise they will be treated as required. Operations sometimes become necessary.

Ulcer of the stomach is a chronic disease and liable to many relapses. Many cases of constant pain in the stomach are due to an old ulcer which has become healed, the scar having caused constrictions in the organ. (*See also under* "Duodenum, Ulcer of.")

762. The following few remarks on cancer of the stomach are given here

for their general interest. Men are more subject to this disease than women. The earliest age at which cancer of the stomach is generally observed is about forty; the age between sixty and seventy is that which is most frequently attacked.

Cancer of the stomach is rare in persons who have suffered from gastric trouble before. It generally appears in people who up to middle life have enjoyed excellent health. In many cases there is a history of cancer in the family, and where there have been several relatives who have died from it, the suspicion that stomach trouble is due to cancer is very great.

The early symptoms of cancer of the stomach are very insidious, but pain in an individual who has passed middle life, and which is felt apart from the taking of food, should always arouse suspicion. If to this is added vomiting, which is fairly constant and copious, and the colour of the vomited matter is brownish or like "coffee grounds," the suspicion becomes more and more well-founded. Blood-vomiting is rather rare.

In the early stages of cancer of the stomach an operation may prolong life to some extent; but the disease is very destructive of life, and the average duration of a case of gastric cancer is about one year, the maximum being about three years, and the minimum one month. Those cases are the worst in which the vomiting is very obstinate and the liver affected. The treatment, apart from a possible operation, consists mainly in keeping up the patient's strength by suitable nourishment.

763. Dilatation of the stomach generally results from excessive eating and drinking or it may form a complication of other diseases, for instance, ulcer or cancer, owing to an obstruction which prevents the contents of the stomach from leaving it as under ordinary circumstances. On the whole, dilatation of the stomach is rare, and many cases going by this name are no more than severe and lasting flatulence with resulting distension of the abdomen, produced by undue fermentation of the food. Where there really is organic dilatation present, the best form of treatment is to wash out the stomach either daily or at frequent intervals (Lavage). The process is quite a simple one and does not require more than a flexible tube with a funnel end. Many patients learn to apply it to themselves when they have once seen how it is done.

But in the majority of cases it is sufficient to adopt the treatment recommended under the heading "Flatulence."

That the stomach is liable to various more or less serious injuries and accidents is well known.

Almost the whole of the stomach may be removed by operation, and there are many people living in comparative comfort who are minus this important organ. In such circumstances the function of digestion is transferred to the intestines, especially the duodenum.

Stone **764**

This term is used principally in connection with—or as a synonym for—stone in the bladder; but stones—or calculi, as they are called technically—form in other parts as well, as, for instance, in the kidneys.

Stone in the bladder occurs at all ages, but chiefly in elderly men between the ages of fifty and sixty. Whilst it is rare in young men, it occurs fairly frequently in little boys. It is rare in females.

The consumption of much meat and

beer in liberal quantities are known to be two rather common causes of stone in the bladder. But there are also certain other causes of which we know very little, including residence in certain localities where the water is not necessarily the determining factor. (*See also under* "Bladder, Diseases of.")

It is not possible to remove stones from the bladder otherwise than by operation. Medicinal treatment, though it may prevent the formation of gravel and stone, is generally useless in influencing existing stones. (*See under* "Uric Acid Diathesis.")

The operation for removal of stone from the bladder consists in either crushing the stone whilst yet in the bladder by means of a suitable instrument and subsequent evacuation of the fragments through a large catheter (this operation being known as lithotrity or litholapaxy) or in opening the bladder from outside either in the lower abdomen or in the perineum (suprapubic lithotomy or perineal lithotomy). Each of these operations has its advocates and opponents.

Stricture **765**

By stricture we mean the contraction of a natural channel or passage to such an extent as to interfere with its normal function. The most familiar instance of stricture is that of the urethra. Stricture occurs also in the bowel, especially the rectum, as well as in the œsophagus.

The first sign that there is a tendency to stricture is an alteration in the stream of urine, which becomes crooked, thin, or "forked" instead of being straight and single. To this are added a frequent desire to urinate, dribbling of urine and inability to empty the bladder properly.

The treatment of stricture is one by instruments only. In some cases it is sufficient to pass bougies or metal sounds for the purpose of widening the urethral passage; in others, cutting operations become absolutely and immediately necessary.

Neglect to have a stricture attended to without delay, and as soon as there are difficulties in passing water, may have serious results. The straining may cause hernia or bursting of the bladder.

Sulphonal Poisoning **766**

Sulphonal gives rise in many cases to symptoms of poisoning, either through excessive and continued use or through overdoses. The poisoning is hardly ever fatal, but the symptoms are not infrequently alarming. They include vomiting, pain, and discomfort in the region of the stomach, headache, noises in the ears, drowsiness, and general depression.

Acute sulphonal poisoning is rare. It shows itself in the form of profound collapse and unconsciousness, with signs of paralysis.

The treatment of the acute form is to empty the stomach with the stomach-pump, or by an emetic, and to administer stimulants, and warmth to the extremities, the patient remaining recumbent.

Chronic sulphonal poisoning must be met by the suspension of the drug until all the symptoms have disappeared. Those who are in the habit of using this hypnotic should every now and then discontinue it for a few days and replace it by some other, if they do not adopt the preferable course of discontinuing the use of hypnotics altogether.

These remarks apply also to veronal and trional known now officially as

barbitone and methyl sulphonal respectively, hypnotics which are very much in use, and which have of late become rather notorious through a number of deaths caused by their employment for suicidal purposes or in unreasonable doses.

Sunburn **767**

Some persons are exceedingly liable to severe sunburn, whilst others experience it only in a very mild form.

Fair complexioned individuals are far more subject to it than those whose skin is dark, and they frequently develop a troublesome inflammation of the face through a brief exposure to the rays of he sun, or to those from powerful electric arc-lamps.

Freckles (which see) are a mild form of sunburn.

Slight cases are best left alone, or the face may be sponged with a little eau de Cologne or rose water. Severer ones are benefited by the application of lead lotion with a little laudanum added to it.

As a preventive of sunburn, and where veils and masks are inconvenient, it has been recommended to use "grease paints," such as are used by actors in their "make-up."

Sunstroke (Insolation) **768**

There are several forms of sunstroke or heatstroke. One is simple exhaustion similar to that in a fainting attack, during which death may occur through heart failure. Another is the so-called asphyxial form, or sunstroke proper, the symptoms of which are sudden unconsciousness, a cold skin, and feeble pulse. Where the patient does not die the stroke often leaves behind signs of paralysis or impairment of the mind.

In the hyperpyrexial form—or heat fever—the stroke is not caused so much suddenly by the effect of the sun's rays, but more by a somewhat continued exposure to severe heat—natural or artificial—whilst in a condition of physical exhaustion. The chief symptom is a high degree of feverishness, with marked deliriousness and epileptic-like convulsions. Most of these cases succumb, though sometimes they show a temporary improvement.

For the treatment of simple cases of sunstroke, see under "First Aid." Sufferers from more or less chronic heat-fever should be removed as soon as possible to a cooler climate, or, at least, to a place where the heat is more bearable. (*See* "Heat-exhaustion.")

Workmen engaged in employments necessitating exposure to high temperatures are frequently attacked in the same way.

Suppositories **769**

These are small solid masses introduced into the end of the bowel through the anal opening, either for the purpose of inducing an evacuation in cases of constipation, or with the object of nourishing a patient who cannot take food in the ordinary way.

A small piece of soap or tallow candle, shaped as desired, usually in a conical form, makes a serviceable suppository against constipation, but there are several official suppositories prepared ready for use, including one of glycerine.

Medicated suppositories for treating local diseases of the rectum, such as piles, are also in frequent use.

Sweating Sickness (Miliary Fever) **770**

This disease is now not so prevalent as it used to be at one time, especially in England—hence the old designatior

"sudor anglicus" (English sweat). It is an infectious, epidemic illness characterised chiefly by fever, most profuse perspiration and a rash which consists partly of red pimples and partly of small blisters containing a clear liquid. Such miliaria—as these blisters are called—sometimes accompany also other diseases in which there is much perspiration, for instance acute rheumatism.

The fever may last about 8 or 10 days and the treatment is like that of other feverish illnesses. The great thirst occasioned by the excessive perspiration necessitates large draughts of water and they may be given freely.

Syncope or Fainting **771**

By syncope we mean a state of suspended animation, caused chiefly by the arrest in the heart's action. It may be the result of actual disease of the heart, or of some mechanical interference with its function, as, for instance, tight-lacing; or the cause may lie in unaccustomed conditions, for instance, severe heat (*See under* "Sunstroke"), in the action of poisons or in excessive smoking.

An attack of syncope may also be induced by nervous shock, such as unexpected joy or grief, or by severe indigestion. Serious injuries, including hæmorrhage, are very liable to be followed by a fainting attack. Other causes are exhaustion from hunger or fatigue, and impure atmosphere, fright, excessive cold, and so on.

In many cases a combination of two or more of these causes produces an attack of syncope which may end fatally in a very short time. The first signs that a person is about to faint are sudden paleness, staggering, and sometimes vomiting. The sufferer experiences a sinking feeling at the top of the stomach, he turns giddy, his vision becomes indistinct, and, if not supported, he falls down quite unconscious. The pulse cannot be felt, and the respiration takes the form of occasional sighs, or stops altogether.

In most cases these vital functions soon begin to return, at first almost imperceptibly. In rare cases syncope ends fatally; but this happens, as a rule, where the heart is organically diseased, or where the syncope was caused by a serious injury, or hæmorrhage.

As to the treatment of a fainting attack, *see under* "First-Aid."

Syringomyelia **772**

A degenerative disease of the spinal cord of which the symptoms are absence of sensation, weakness and wasting of the muscles, some spinal curvature, deformities in joints and several others. It occurs in persons between the ages of twenty and thirty, is of long duration and can scarcely be influenced by treatment, except that each symptom is to be alleviated as it arises. The patient having lost the sense of appreciating heat or cold is liable to burning and scalding accidents unknown to him and precautions have to be taken accordingly.

Some favourable results have recently been reported from the employment of the X-Rays, applied to the spine.

Taste, Disorders of **773**

The sense of taste is subject to several disorders, such as an increased sensitiveness, a perverted state of the sense, and its total or partial loss. The latter defect is fairly common, and is generally due to some disturbance in the nervous system, especially in hysterical females. Often the com-

plaint is temporary only, and treatment is hardly required. Since impairment of the sense of taste is experienced when there is some inflammation of the mouth or tongue, and also as a symptom of an acute cold.

A sweetish taste in the mouth which lasts for some time should arouse a suspicion of diabetes. It is also often complained of in connection with decayed teeth or an alveolar abscess. some persons are also troubled in this way when suffering from chronic catarrh. Gargling with dilute glycerine of tannic acid will bring some relief, but the cause must be looked for and removed if possible.

It is perhaps as well to mention that frequently a loss of the sense of smell is either accompanied by or mistaken for loss of taste.

Tattoo Marks **774**

Doctors are frequently asked how tattoo marks can best be removed. There is no method which is successful in every case, but very often good results can be obtained from painting the marks, by means of a camel-hair brush with glycerine of papain.

A writer in a medical journal some time ago suggested the following treatment: "Make a mass, the consistency of dough, with salicylic acid, and glycerine, apply to the marks, and confine with a compress and strips of plaster for from five to seven days. Then remove the layer of epidermis over the marks and apply salicylic acid and glycerine as before. It may be necessary to apply three times, but usually the second application removes the marks."

The method of treating skin diseases, by freezing the skin with carbolic acid snow, has been successful in a few cases of tattoo marks.

I reproduce the following suggested treatment of tattoo marks from an American source without commenting on it, as I have no personal experience of the same. "The skin is first covered with a concentrated solution of tannin and re-tattooed with this in the parts to be cleared. Then an ordinary nitrate of silver crayon is rubbed over these parts which become black by formation of tannate of silver in the superficial layer of the derma (the underskin). Tannin powder is sprinkled on the surface several times a day for some days, to dry it. A dark crust forms which loses colour in three or four days and in two weeks or so comes away, leaving a reddish scar free of tattoo marks and in a few months little noticeable. It is well to do the work in patches about the size of a silver dollar at a time. The person can thus go on with his usual occupation."

Tea-Drinking, Excessive **775**

This is a frequent cause of indigestion and nervous troubles, including insomnia. Singing and noises in the ears can also be induced by much tea drinking, and another frequent symptom is an increase in the function of urination. Some persons suffer from tremblings through tea-drinking, much as others do through drinking large quantities of alcohol.

Very few persons know how to prepare tea properly. The tea-leaves should never be allowed to remain in the teapot, as thereby the brew becomes a solution of tannin, but the infusion should be strained a few minutes after the tea has been added to the boiling water. I am of the firm opinion that the vast number of cases of indigestion one sees among women are due to the large amount of tannin they consume under the name of tea.

Will my readers help to bring about a much-needed reform?

Teeth, Diseases of 776—777

Most diseases of the teeth are of such a nature as to require the services of a dentist, and little can be said here of any practical utility except with a view to prevention. The most frequent of these diseases is caries, or disintegration of the tooth's surface, so that the central and sensitive part is laid bare. This central "pulp," as it is called, contains the nervous elements of the tooth, and is the real seat of toothache.

It should be borne in mind that caries of the teeth always proceeds from their external surface. Outside agencies, for instance, fermentation caused by particles of food remaining in the mouth, attack and destroy first the enamel—the lustrous covering of the teeth—and afterwards the dentine, or the bony part of the tooth, producing the well-known cavities in the teeth which in many cases require "filling."

In other cases, the destruction of the tooth proceeds further and further until it becomes loose and is shed altogether, unless this process is arrested by mechanical interference on the part of the dentist. Looseness of the teeth can to some extent be kept in check by daily massaging of the gums with the finger and a little tincture of iodine.

The regular and constant use of antiseptics and the toothbrush, and the daily removal from the mouth of particles of food which would otherwise produce acid fermentation and destroy the enamel, can do a great deal towards preventing caries of the teeth.

I am often asked for formulas for a cheap tooth powder, and I generally recommend the following, though I may mention that ordinary soap makes a good substitute if one is not too fastidious in the matter of taste: One is a mixture of equal parts of boracic acid, sulpho carbolate of soda and soap powder, with the addition of a drop or two of peppermint oil if a flavouring is desired. Another is benzoic acid and saccharine in equal parts. Yet another is precipitated chalk 3oz., to 1oz. of chlorate of potash. A good mouthwash is made up as follows: Thymol 4 grains; Benzoic acid 48gr.; tincture of eucalyptus ½oz.; oil of peppermint 8 minims; alcohol to 4oz. One tablespoonful to a glassful of water. A cheap mouthwash may be made by adding a few drops of glycerine of carbolic acid to a wineglassful of chloroform water (not pure chloroform). A solution of magnesia makes a good solvent of tartar on the teeth. Another antiseptic tartar solvent is a lotion of citric acid and phenol, 3 drachms of the former and ½oz. of the latter to 1 pint of water. They should be applied by means of a toothbrush which must not be either too hard or too soft.

777. There are also other causes of caries which are not so much within our control, though, fortunately, they are rather rare. I need only mention gout, rheumatism, diabetes, indigestion, certain employments—for instance, in chemical works—and to some extent, pregnancy.

The toothache often experienced in the last-named condition is temporary only, and more of the nature of neuralgia.

Difficult eruption of some of the wisdom teeth is a not uncommon cause of toothache and neuralgia, and even of more serious consequencies, such as convulsions. If lancing of the gums is not sufficient, it may become neces-

sary to remove one or more of the wisdom teeth. A remedy has recently been suggested against toothache which is certainly worth trying in every case. It consists in smelling an uncorked bottle containing oil of mustard whilst holding the eyes and mouth tightly closed.

Neuralgic toothache is best treated by general tonics and attention to hygienic details. Carious toothache, when not too far advanced, can be relieved by the application locally of creosote or carbolic acid. If an abscess has formed, it must be opened and the pus liberated as soon as possible. (*See under* "Alveolar Abscess," "Pyorrhœa," etc.)

Teeth, Grinding of **778**

Grinding of the teeth is, particularly in children, in most cases due to indigestion or a disordered condition of the bowels. Intestinal worms often give rise to this symptom. It is also seen in many rheumatic and gouty adults, usually when they are asleep, but seldom in their waking state.

In a number of people of nervous temperament, teeth grinding when asleep is a manifestation equal in its nature to sleep-walking or sleep-talking. Treatment is hardly ever called for, but if inconvenience is caused to others by the noise made, a precautionary measure may be taken in the form of a folded handkerchief placed between the teeth, but in such a manner and so fastened as not to give rise to suffocation or interference with breathing.

Teething Troubles (Difficult Dentition) **779**

Whilst many of the little ailments from which young infants suffer are wrongly attributed by their mothers and nurses to the cutting of the teeth, it is, nevertheless, a fact that the dentition period in a child's life is one of critical importance. The nervous system of the child is easily susceptible to disturbing influences even if they are of the slightest nature, and the cutting of a tooth is no doubt a somewhat painful process. A slight degree of feverishness and restlessness is natural in every teething child, but in rarer cases the feverishness may become severe, and it may be accompanied by diarrhœa, soreness of the gums, and excessive salivation.

Treatment is seldom required, though when the gums and mouth appear sore, the application of a little glycerine of borax is beneficial. The general practice of lancing the gums is not justified in every case, but doctors often do it to allay the anxieties of worrying mothers.

The second dentition, which begins in children of about six or seven years and lasts until they are about twelve or thirteen, is often accompanied by digestive disturbances, including diarrhœa, and by the condition known as "night-terrors," which is not unknown in young adults, especially girls. To prevent it, it is, as a rule, sufficient to adopt a careful diet, and to forbid such foods as sweets, starches, and fruit, which cause much fermentation in the intestines.

It will interest young mothers and others to know that the first or primary set of teeth in a child consists of twenty and that these milk-teeth, as they are called, are meant to be temporary and to be replaced by permanent teeth later on. The first milk-teeth to cut are the two lower central incisors when the baby is about six or eight months old, then come the four upper incisors, next the two lateral

incisors, then the four upper and lower frontal molars, then the four canine (eye-teeth) and lastly the four posterior molars. The process is generally completed in from the 24th to the 30th month of the child's life, but irregularities may occur both as to date and order of the eruption, especially when the child shows signs of rickets through unhygienic surroundings or injudicious feeding. It is also a fairly regular occurrence that bottle-fed children cut their teeth later than children brought up on the breast.

As already mentioned the second or permanent dentition commences about the sixth year and is really not complete until the appearance of the wisdom—or back—teeth, four in number, one in each corner of each jaw—which may be delayed until the age of twenty-one or even longer. The number of permanent teeth is thirty-two.

Temperament **780**

This subject has in recent years undergone considerable modification. It used to be believed that the physical constitution and peculiarity of an individual accounts largely for his mental development and attitude. By distinguishing four kinds of temperament, the bilious or choleric, the lymphatic or phlegmatic, the nervous and the sanguine, the ancient writers thought they could classify the whole of humanity, but it was soon found that definite demarcation was quite impossible. Modern authorities have therefore abandoned the attempt, and temperament is now regarded chiefly as an outward manifestation of departures from the normal function of the higher nervous centres. This is why we seldom speak nowadays of any other than a nervous temperament by which we really mean a tendency to neurasthenia, hysteria, and other derangements of the nervous system.

And yet, the old classification was, if incomplete, not altogether wrong. Experience shows that what is known as the sanguine temperament, an inclination to be hopeful and optimistic, to take life easy and not to allow oneself to be disturbed by incidents which cause others to fly into a passion, is generally associated with a rotundity of person, a florid complexion resulting from a richness if not superfluity of blood, a calmness of manner necessitated by the physical constitution.

Similarly, the bilious or choleric individual is as a rule the victim of gout and other affections directly or indirectly arising from "over-production of bile," denoting abnormal activity of the liver.

Again, those who might be described as lymphatic or phlegmatic are, as a rule, awkward of movement and ill-proportioned in build of body, of pasty complexion and ungainly features. They are the people who through being subject to the excessive formation of lymphoid structure—as evidenced in an enlargement of the tonsils, adenoids and lymphadenitis, etc.—appear to be more easily attacked by bacteria and liable to infectious diseases.

Finally, the "nervous" persons are distinguished by their unstability. They may be either hasty or violent or languid and dejected. Their sensations are intense and out of all proportion to the exciting cause. They can endure privation and fatigue to a degree which astonishes them as well as their friends and they very often exhibit remarkable mental abilities.

In the above remarks I do not claim to have exhausted the subject.

Temperature **781**

When a doctor speaks of a patient having a high temperature or "temperature" he means that the temperature of the body, as measured by the thermometer, is above the normal.

The average normal temperature, as shown if the thermometer is placed under the arm-pit, is 98.6 Fahrenheit, or 37.0 Centigrade. The real temperature of the body is, however, about half a degree higher; and this can be demonstrated by introducing the mercury end of the thermometer under the tongue and into the rectum.

An increase in the temperature is generally a sign of feverishness, and we distinguish moderate and high degrees of fever, a temperature of between 102 and 103 constituting the dividing line. Temperatures above 106 or 107 are extremely dangerous signals. They are known by the name of "hyperpyrexia."

The temperature in a feverish patient is generally somewhat higher in the evening than in the morning. Certain illnesses—for instance, pneumonia and typhoid fever—show in nearly every case a similar rising and falling of the temperature. This is illustrated on forms which doctors and nurses use in cases of long illness, and which they call "temperature charts." The experienced eye of the doctor can often tell from the appearance of the chart what illness the patient suffers from, what progress he is making, and what the chances of recovery are. This is the reason why, when visiting his patient, the doctor looks at the chart first.

Temperatures under 98.6 are called sub-normal, and are generally a sign of vital depression and physical exhaustion. Such temperatures are seen, for instance, in starvation and some wasting diseases.

Tendons, Diseases of **782**

The tendons, which are bundles of fibres attaching muscles to bones, are subject to inflammations, injuries, and other affections.

Partial or complete rupture of a tendon is a frequent accompaniment of sprains and dislocations. A comparatively common occurrence is the rupture of the tendon of Achilles over and at the back of the heel. Tendons are also liable to be dislocated or displaced from their position. The accident generally happens to the wrist, elbow or ankle through a sudden severe exertion. There is acute pain and some loss of power. The remedy consists in replacing the tendon and applying a bandage or, if necessary, plaster of Paris.

An example of inflammation of a tendon (tenosynovitis) we have in what is called whitlow. Tendons also participate freely in other inflammations about joints and in rheumatic affections, especially in gonorrhœal rheumatism.

The sheaths of tendons, particularly near the wrist, are often liable to dilate and to form a ganglion. Contractures in tendons give rise to deformities, like club-foot, and distorted fingers.

The treatment of diseases of the tendons is in nearly every case of a surgical nature. (*See under* "Ganglion," "Club-foot," etc.)

Tenesmus **783**

This term means a painful straining atempt to evacuate the bladder or the bowels without achieving the desired result. In practice it is limited to unsuccessful compliance with a frequent desire to go to stool. The symptom is present in catarrh of the bowels, in dysentery and cholera. Occasionally also in neurasthenia and in cases of

organic obstruction. The treatment is directed to the removal of the cause. Where it lies in catarrh of the bowels, charcoal in the form of powder or tablets—the former in doses of a teaspoonful or two after meals swallowed with a little water—is of service. Constipation will of course be treated in the ordinary way. Neurasthenic or hysterical tenesmus is best combated by potassium bromide in 5 or 10 grain doses, two or three times daily after food, in a little water.

Tetanus **784**

Tetanus—or lock-jaw—is a most terrible disease, resulting from the introduction into the system of tetanus microbes through an open wound or some insignificant abrasion. The essence of the disease is a succession of violent convulsions in one or more group of muscles.

The poisonous microbes—or bacilli—are supposed to originate, as a rule, from garden earth or stable refuse. The first symptoms appear usually four or five days after the infliction of the wound, though the time may be much longer. Along with a little feverishness, the patient complains of pains and stiffness in the muscles of the jaws, so that he cannot open his mouth properly, a symptom known as trismus. He seems to be grinning, or laughing sardonically (Risus sardonicus).

After that, the neck muscles become stiff and painful, and so the affection gradually spreads all over the body, including the limbs. In addition, there are spasms, which become more and more frequent and of increasingly longer duration.

Sometimes the cramp is so intense that the patient touches the bed with his head and heels only, the whole body appearing arched forward like a hard bent board (Opisthotonus). All the time the sufferer is mentally unaffected, and when free for a moment he dreads the coming of the next convulsion, whilst his respiration is very laboured. He is full of perspiration, and the urine is diminished in quantity. Death mercifully brings relief in about four days, or even sooner.

Though a doctor has not much difficulty in recognising tetanus, there are certain conditions which have some resemblance to it, such as hydrophobia, meningitis, and hysteria.

In newly-born children, tetanus occurs sometimes through infection of the navel. It generally ends fatally in a few days.

Disinfection of any wound or scratch is necessary to guard against tetanus. As to treatment when it has actually broken out there is very little hope of saving the patient. The disease is now treated by means of anti-tetanus serum, which is injected into the skin or into the brain or spinal cord direct, as the only remedy presenting some favourable chances, and success is achieved in a fair proportion of cases.

To diminish the severity and frequency of the convulsive attacks, chloral hydrate is administered in fairly large doses—say, 15 or 20 grains repeated at intervals if necessary. During the great war, tetanus was prominent among the armies of all the nations until greatly controlled by prophylactic injections of anti-tetanic serum and better treatment of wounds, the mortality being reduced by about 30 per cent. from 57 to 28.

Tetany **785**

This must be distinguished from tetanus. It is a rare affection of the nervous system, generally ending in

recovery after a few months, the chief symptoms of which are painful spasms in various parts of the body, especially in the hands. One of the diseases supposed to be associated with abnormal action of the thyroid gland or of accessory glands of the latter called "parathyroids."

Children particularly are liable to it, and it frequently is associated with gastro-intestinal disorders or rickets. Where treatment is necessary apart from attending to the cause, potassium bromide in doses of from 5 to 10 grains two or three times daily after food may be tried. Hot baths are also beneficial.

Thirst **786**

Excessive thirst is caused by much perspiration, or by such diseased conditions as feverishness, diarrhœa, increased urination, or vomiting. It forms one of the symptoms of diabetes and cholera. Apart from treatment of the cause thirst can be relieved by barley water, toast and water, small pieces of ice sucked at intervals, or acid drinks made with either citric, tartaric, or dilute phosphoric acid in doses of 5 to 20 grains of the first two, or 5 to 20 drops of the last named, to a glass of water.

Though the sensation of thirst is generally referred to the back of the throat or to the lips which feel dry and parched, it is nevertheless due to an insufficiency of water in the system generally, because if fluid is introduced either through the rectum or through the skin there is a considerable lessening of the thirst.

Throat, Diseases of **787**

The throat generally, apart from the affections described under such headings as laryngitis, pharyngitis, etc., is liable to be attacked in illnesses like measles, scarlet fever, diphtheria, syphilis, and so on. It is frequently congested as the result of a catarrhal cold, or it may become ulcerated or structurally deformed. The treatment will, of course, be directed to the removal of the cause.

Thrush **788**

I have briefly referred to this children's disease under the heading "Mouth, Diseases of." It is characterised chiefly by the presence of white patches over the lips and the mucous membrane of the mouth. The treatment of children with this affection should aim at improving the general condition of the patient. The food should be made suitable, and the diarrhœa, which is frequently present, and which causes sores round the anus —a circumstance known among mothers as the "thrush having gone through"—must be checked. The mouth should be thoroughly cleaned after each meal with a clean piece of soft linen, and the sores in the mouth and at the anus may be touched with glycerine of borax.

Thyroid Gland, Diseases of **789**

As already mentioned under the heading "Goitre," the thyroid gland is situated in front of the neck over the top of the windpipe. It consists of two halves and a bridge or "isthmus" which connects them. The function of the thyroid gland is not quite understood, but it is supposed to secrete a substance which is in some way necessary to the system as a whole, because when it is diseased or atrophied such conditions as cretinism, tetany and myxœdema result. Goitre, on the other hand, means an enlargement of the thyroid gland.

In very rare cases, the thyroid becomes acutely inflamed, and the inflammation may lead to abscess. The treatment is like that of inflammation in any other part.

The thyroid extract—a medicinal substance used in a number of diseases—is prepared from the thyroid glands of animals, especially sheep. Great care must be exercised by those who take it, as it is apt to produce a condition known as thyroidism and of which the signs are palpitation of the heart, sickness, headache, muscular pains, diarrhœa, irritability and general weakness. The doses should therefore always be small at the beginning—from half a grain to one grain—and if no symptoms of thyroidism appear they may be increased gradually up to 4 or 5 grains two or three times daily after food. If palpitation, etc., result, the doses must be reduced again. In some cases thyroidism is prevented by causing the patient to lie down for half-an-hour after taking a dose; in others, by the plan of taking one fairly large dose—say, 10 grains—once daily at bedtime.

789a. The thyroid gland is one of a number of internal secreting organs called ductless glands or endocrines (the others being the supra-renal bodies (*see under* "Addison's Disease"), the spleen (*see* Index), the thymus (*see* "Status Lymphaticus") and the pituitary body (*see under* "Acromegaly and Infantilism") which have received in the last few years a great deal of attention, as it is presumed that when abnormal they are the cause of many abnormal conditions which have until now remained more or less a closed book. The investigations are not yet complete, but several important results have already been obtained. Thus, extracts of the pituitary body of animals are already in use to facilitate child-birth or to revive sufferers from shock or collapse; adrenalin, prepared from the supra-renal glands, is very helpful in arresting intractable hæmorrhage, both internal and external; thyroid gland extract may prove invaluable in the treatment of mental affections, a beginning having already been made in this direction, and so on.

Tic Douloureux **790**

Tic douloureux, or facial neuralgia, has been mentioned under the heading "Neuralgia and Neuritis." Apart from the general treatment outlined there, attention should, in the first instance, be directed to the condition of the teeth. Where the cause of the pain cannot be discovered relief may frequently be obtained by the formation of a small blister at the nape of the neck, say, through the application of a few drops of glacial acetic acid or liquor ammoniæ.

The operation of nerve-stretching, or nerve cutting, has often to be performed in intractable cases of tic douloureux. In others treatment by "seton" is sometimes adopted with success. (*See under* "Migraine.")

Tinea **791**

This term which is practically synonymous with ringworm is employed occasionally to denote a skin disease caused by a parasite fungus. The various forms will be found discussed under the heading "Ringworm." There remains here to mention one known as Tinea versicolor, a skin affection which gives rise to large brownish or yellowish patches, chiefly on the chest and the trunk generally. As a rule there is some itching, but

never very severe. The name of the vegetable parasite producing the eruption is microsporon furfur. As regards treatment, the best success is obtained from the use of a lotion of hyposulphite of sodium, strength 1 in 8, or of sulphur ointment.

Tobacco Poisoning and Tobacco-Smoking 792—794

Apart from the nausea and dizziness produced by first attempts at smoking, and the very rare cases of acute nicotine-poisoning by the administration of large doses of tobacco internally, the continued excessive use of tobacco by smoking, chewing, or snuff-taking influences injuriously the digestion, and it frequently produces actual heart disease, especially if alcohol is consumed at the same time in liberal quantities.

The harmful effect of tobacco smoking, spoken of as chronic nicotine poisoning, generally shows itself first in the form of palpitation and irregular action of the heart, which is mostly experienced in the middle of the night, making sleep impossible (tobacco-heart). The throat feels irritated, necessitating its frequent clearing and the bringing up of very little phlegm (smoker's throat). The patient complains that his vision is becoming impaired (tobacco amblyopia), and he notices also that his hands and fingers tremble, slightly but unmistakably. Giddiness is another frequent symptom.

At a later stage the heart is decidedly weakened, and the blood-vessels tend to become thickened and to lose their elasticity. Angina pectoris is said by many authorities to be due to, or at all events aggravated by, tobacco smoking in excess.

Several instances have been recorded of sudden cardiac failure after a bout of heavy smoking.

793. Doctors are frequently asked by their patients how they can conquer the craving for tobacco. There really are no remedies available except a strong will and determination, but these may be assisted to some extent by the plan of chewing a piece of quassia or some other bitter substance whenever one experiences the desire to smoke.

A plan I often recommend is to reduce the number of cigars, cigarettes, or pipes by one daily until it has reached the permitted quantity. In this way I have succeeded in curing inveterate smokers, either partially or entirely. The very fact that they get into the habit of keeping some sort of a count of the quantity they smoke tends to diminish it to a considerable degree.

I consider a fair and permissible average three or four smokes daily, each of about ten minutes' duration, always after meals.

To remove tobacco stains from the fingers they should be rubbed with a dilute solution of chlorinated soda on lint and then washed with soap and hot water as well as pumice stone. Very deep stains require the use of pumice stone moistened with dilute hydrochloric acid.

794. There is much difference of opinion as to which is the least injurious form of tobacco-smoking, the cigarette, cigar, or pipe. A general answer is impossible and much depends on the constitution of the individual, on the strength of the tobacco, on the amount smoked, etc. The temptation to over-indulgence is greater with regard to cigarettes, hence the prevalent view that the pipe is the best or at any rate the least harmful method of smoking.

Chewing is decidedly injurious on account of its effect upon and over-stimulation of the salivary glands.

That smoking is a most harmful vice if practised by young persons who have not yet reached full development there can be no doubt whatever. It arrests growth, interferes with digestion, irritates the nervous system and leaves its injurious influence for many years or for life.

With regard to adults all one can say is that there is no particular virtue in smoking, nor is there any particular harm—if it is not indulged in to excess. A good many people find in it an excellent sedative, a good many others an equally excellent stimulant or an aid to digestion. Tobacco may be a good servant, but it is a bad master.

Toes, Diseases of **795**

Most diseases of the toes are attributed to the wearing of defective boots and particularly to boots and shoes which are narrow and pointed at the toe-end. They will be found described under various headings.

Tongue, Diseases of **796—799**

Many persons experience considerable alarm, or are in a constant state of depression, because their tongue is always more or less "coated" and dry. It is, therefore, as well to state at once that this in itself is of no serious importance. A furred tongue is very often due to the habit of sleeping with the mouth open, of it may be the result of some such indulgence as smoking, and is compatible with perfect health and excellent digestion. On the other hand, it does not by any means follow that a clean and healthy-looking tongue is a sign that there is absolutely no disease present. I have seen patients with cancer of the stomach who have shown a perfectly clean tongue almost to the last.

The same remark applies to the condition known as "furrowed" or "fissured" tongue. It is by itself no criterion of illness.

It is, of course, different when the "furred tongue" is accompanied by other marks and symptoms of ill-health. In all feverish diseases, for instance, the tongue is covered with a more or less thick coating of fur, which is either white or yellowish-white, though sometimes, especially in typhoid fever, it is quite red and glazed or shining.

The so-called "strawberry-tongue"—in which the follicles on the surface project through the fur like red berries—is a well-known symptom of scarlet fever and other diseases.

In conditions of exhaustion, the tongue is, as a rule, red, raw, and dry, and sordes—or crusts—are present on the teeth and gums.

In anæmia, the tongue is more or less pale, flat, and flabby, and it shows at the sides indentations from the teeth.

Indigestion and affections of the digestive organs generally are, as a rule—but not always, as already mentioned—accompanied by some alteration in the appearance of the tongue. This is also the case in acute affections with symptoms of feverishness, when the tongue appears much redder than usual.

The tongue as an independent organ is subject to several diseases, including inflammation, cancer, tongue-tie, and ulceration.

797. Inflammation of the tongue (glossitis) which may result in an abscess, is due to various causes, from mercurial poisoning to a "common

cold." It is frequently the outcome of a wasp-sting or of some mechanical or chemical injury, as from a bad tooth or a scald. In most cases, a suitable mouthwash, say a warm solution of glycerine of borax, is sufficient to effect a cure. Rarely, if an abscess forms, an incision becomes necessary. (*See also under* "Mouth, Diseases of.") Acute glossitis occasionally assumes a chronic form through excessive smoking, and other similar causes of irritation. The treatment is largely preventive and a mouthwash of potassium chlorate—1 or 2 per cent. strong—nearly always beneficial.

798. Cancer of the tongue is one of the most rapidly fatal diseases, the average duration of the illness being in non-operated cases about a year. It is more than twice as common in men than in women, and is very rare in persons under thirty-five, the commonest age being between forty and forty-five. Some localities seem to show a greater prevalence of cancer of the tongue than others. The sooner the case is diagnosed and operated upon the better the chances of prolonging the life.

Ulcers of the tongue may be simple, that is, due to local inflammation, digestive troubles, or decayed teeth, or they may be the result of cancer, tuberculosis, or syphilis.

799. As to tongue-tie, the condition is supposed to exist in many cases in which the children are only backward in speaking; a doctor should therefore be consulted in every case as to the necessity of cutting the "frænum," or little string-like membrane under the tongue. Many mothers and nurses do it quite unnecessarily; besides, the little operation is not without its dangers, especially through excessive hæmorrhage.

Rarer diseases of the tongue, which I need only mention are: Chronic abscess, adhesion to the under surface, wasting, cysts, congenital largeness (macroglossia), the condition known as "tongue-swallowing" caused by an abnormal mobility of the organ, and innocent tumours, such as warts and nævi.

Tonics 800

Tonics are remedies which impart "tone" or permanent strength to the entire organism, or any particular part of it. General tonics are, for instance, iron, quinine, petroleum emulsion, and cod-liver oil. Nervine tonics, for the improvement of the nervous system, are, among others, nux vomica, strychnine, phosphorus, etc. Most of these are included in the well-known preparations which go by the names of syrup of hypophosphites, Easton syrup, Bynin Amara, and so on. They must be taken with caution as they contain poisons.

The following is a useful formula for a cheap and innocuous general tonic which may be tried almost under any circumstances: Citrate of iron and quinine 20 grains, tincture of orange 20 minims, syrup 3 drachms, chloroform water to 4 ounces. Tablespoonful doses after food preferably through a straw to prevent blackening of the teeth. For children, correspondingly smaller doses.

Tonsils, Diseases of 801—803

The tonsils, which are two gland-like structures situated at the back of the throat behind the tongue, generally participate in the diseases which affect the mouth and throat. Independently they are subject to acute inflammation and chronic enlargement.

Acute inflammation, known also as "tonsilitis," or "quinsy," is seen generally in young people during damp weather, and one attack seems to predispose to subsequent attacks. It begins, as a rule, with more or less fever, the tongue is covered with a yellowish coating, and the smell from the mouth is very unpleasant. Swallowing is difficult, and opening of the mouth painful. The voice is thick and nasal. There is some deafness, and the breathing is laboured. When asleep the patient snores very loudly.

On looking at the back of the throat both tonsils, or only one, are seen to be red and swollen, and possibly covered with patches of white secretion, or with matter, since tonsilitis often ends in abscess. The inflammation extends to all the neighbouring parts, the palate, the pharynx, the uvula, etc.

802. The treatment at first consists of rest in bed, hot poultices round the throat, inhalation of steam, and gargling with warm milk and water. Many patients, however, prefer to suck small pieces of ice, as being less painful, and I favour this method of treatment where ice can be obtained. The diet must consist of liquds only, preferably cold or luke-warm. The inflammation generally subsides in a day or two, and then astringent remedies, such as are recommended for pharyngitis, may be employed, together with internal tonics, like quinine and iron.

If an abscess has formed—quinsy, in the strict sense—it must, of course be incised at the earliest possible moment.

803. Chronic enlargement of the tonsils is a very frequent occurrence in young people of scrofulous habit of body, or it is the result of acute tonsilitis. The symptoms and treatment are practically the same as mentioned under "Adenoids," the two conditions going, as a rule, together. In many instances, enlarged tonsils return to a normal state by attention to the general health, and for this reason I am not very much in favour of their removal, especially in the case of young children. Moreover, they frequently grow again. Occasionally, however, this is the proper course to recommend. There are special instruments provided for the removal of enlarged tonsils, called guillotines.

In the case of adults enlarged tonsils may be treated with success by painting them daily for a few weeks with a 50 per cent. solution of guaiacol in oil of almonds. All food and drink should be taken no more than moderately warm and smoking should be abstained from.

Touch, Disorders of **804**

The sense of touch is subject to two disorders particularly: one is an increased sensibility, which makes itself manifest in the form of pain of an excruciating character upon the slightest touch of the skin—hyperæsthesia, or in the form of cutaneous sensations, known as "pins and needles," or "tinglings"—paræsthesia; and the other is a decrease in the sensibility, more or less pronounced—cutaneous anæsthesia.

Both are generally caused by some functional or organic disturbance in the nervous system; they are common symptoms of hysteria and neurasthenia, and the treatment must be directed to the cause. Relief, however, may be obtained in cases of hyperæsthesia or paræsthesia by the local application of hot fomentations or friction with methylated spirit, the use of anodyne remedies, such as dilute veratrine ointment, or a liniment composed of chloroform one part and belladonna liniment

three parts, or a lotion made up of equal parts of ether, sal volatile, laudanum, and eau de Cologne. Electricity, too, will in many cases successfully combat the acute pain and also the loss of the sense of touch.

All these remedies, being capable of doing very great harm, they must be used with caution, and preferably under the care of a doctor.

The loss of the sense of touch is a frequent symptom of locomotor ataxy, and it is also in many cases an important sign of an approaching attack of hæmorrhage in the brain.

Trachea, Diseases of **805**

The trachea, or wind-pipe, is the tube which connects the larynx with the bronchi, and what has been said under the headings "laryngitis" and "bronchitis" applies also to this portion of the organs of respiration.

The operation known as tracheotomy consists of cutting into and opening the trachea to prevent suffocation. It frequently becomes necessary in diphtheria and other diseases producing obstruction in the respiratory passages. The trachea being opened, a tube is inserted to allow breathing and left in position either temporarily or permanently.

Trance **806**

Trance, or lethargy—a sleep-like condition from which the sleeper cannot be roused—is generally a symptom of hysteria, though it must be admitted that its causation is not quite understood. It is observed, as a rule, in young women, rarely in men or children. That certain individuals appear to have the power of throwing themselves voluntarily into a state of trance resembling death cannot be denied.

All the treatment required during a state of trance is to feed the patient—by the rectum if necessary—and to apply external warmth. (*See also under* "Catalepsy.")

Transfusion of Blood **807—808**

By this term is understood the injection of blood from one human subject into the veins of another, or of blood from some lower animal into a human subject. The process is generally resorted to when life is in danger through excessive hæmorrhage.

Frequently in such cases, it is sufficient to inject into the circulation of the patient a "saline solution" consisting of 0.6 per cent. of common salt in distilled water and at a temperature of about 99 degrees F. As much as four pints may be injected, and the immediate result is a revival of the patient's sinking vitality. Similar results in cases of serious hæmorrhage have been obtained through the injection of a large quantity of saline solution into the rectum.

808. We speak of "auto-transfusion" when by the application of bandages compressing the arms and legs or by so placing the patient as to leave the head lower than the rest of the body, more blood is made to flow towards the brain than to other parts.

Transposition of Organs **809**

There are individuals whose heart is on the right side of the body instead of on the left, but who enjoy, nevertheless, perfect health. In rarer instances other organs—for instance, the liver, spleen, and stomach—are also situated on the opposite side to the one to which they belong normally. Doctors call this condition "transposition of the organs."

Tremors (Tremblings) 810

Tremors—especially of the hands, head, or the tongue—are usually a symptom of some disease, with the exception, of course, when they are present in old people. There are the well-known tremors of delirium tremens, the shaking which forms part of paralysis agitans, the "intention tremors" of disseminated sclerosis, the tremors of mercurialism and of general paralysis and a number of others.

Trichinosis (Trichiniasis) 811

A parasitic disease produced by the eating of "measly" meat—principally pork—infected with trichina spiralis. The parasite is a kind of worm which has its habitation in the muscular fibres of the pig and which when consumed by man sets up a combination of symptoms, the principal being feverishness, sickness, dizziness, diarrhœa, painful swellings in the muscles, a swollen face, perspiration, sleeplessness, delirium, and general prostration.

Trichinosis is a very dangerous disease. Fortunately it is much rarer in England than in other countries. If treatment by emetics and purgatives is commenced early enough, the chances are not quite so hopeless, but when once the parasites have been set free in the intestines and have commenced to invade the muscles and other organs, the outlook is most unfavourable, and all one can do is to support the patient by tonics and stimulants.

Preventive treatment is of greater utility. All pigs killed must be inspected thoroughly, and uncooked or partly-cooked pig's flesh avoided.

Tropical Diseases 812

A number of diseases are more or less endemic in tropical countries where they are responsible for the loss of very many lives, though much has been done in recent years by sanitation and other measures to diminish their evil effects. The principal of these tropical diseases are cholera, dysentery, malaria, plague, sleeping sickness, yellow fever, and the affections due to the presence of worms and parasites in the blood. They will be found described under the various headings.

The importance of tropical diseases from the Imperial point of view as affecting our colonies and overseas dominions is now fully appreciated, and there are special schools in connection with some British Uuiversities at which the subject is taught to men preparing to take up medical work in the tropics.

Tuberculosis 813—814

The name tuberculosis is now applied to a number of diseases which used to be known formerly, and are still known also, under different names. Thus we speak of consumption as "pulmonary tuberculosis," or "tuberculosis of the lungs"; of scrofula as "tuberculosis of the glands"; of consumption of the bowels as "tuberculosis of the intestines," and so on.

The term "tuberculosis" means that a certain organ, or group of organs, is being attacked by tubercle bacilli, or the microbes which produce tuberculosis—a destructive process which may take place anywhere in the body, from the surface of the skin or a joint, to the most inwardly-situated organs.

814. The name "tubercle bacillus" is derived from the circumstance that the microbe produces by its growth little greyish nodules which have been

called "tubercles." Several of these tubercles joining, they ultimately form large masses of diseased tissue which are known as tuberculous infiltrations. These have a tendency to break down and result in ulcers or necrosis.

The treatment of tuberculosis consists in rendering the whole organism stronger and more fit to resist the invasion and gradual multiplication of the tubercle bacilli. This is the object of the "open-air" or "sanatorium" treatment mentioned under the heading "Consumption." In addition, suitable nourishment and such aids to digestion as cod-liver oil or petroleum emulsion are very helpful.

For the treatment of tuberculous glands the X-rays are now employed with considerable success.

Tuberculosis, being a disease of an infectious nature, treatment must be directed also towards prevention of infection. I have dealt with this part of the subject when discussing consumption, and I only wish to repeat here that great attention must be paid to the source of the milk supply, milk from tuberculous cows being doubtless capable of producing consumption and other forms of tuberculosis.

Cases of "surgical tuberculosis," affecting limbs and joints, require, of course, skilful surgical treatment.

All forms of tuberculosis must now be notified to the medical officer of health.

Tumours **815—816**

There are two kinds of tumours innocent (or benign) and malignant. An innocent tumour is a swelling or enlargement which may cause pain or inconvenience, but does not affect the general health to a dangerous extent except by such complications as hæmorrhage, interference with respiration or swallowing, etc. If removed by the surgeon's knife, an innocent tumour does not as a rule return, nor does it set up similar tumours in other parts of the body. Innocent tumours may be situated anywhere, internally or on the surface; they consist of an excess of normal structure and are named accordingly. An adenoma, for instance, consists of glandular tissue and grows in connection with a gland, like the breast; angioma means a tumour consisting of dilated blood-vessels; fibroma or fibroid tumour is one made up of fibrous tissue similar to that forming muscle; lipoma consists principally of fatty tissue; chondroma of cartilage, osteoma of bone, myoma of muscle, lymphangioma of lymphatic tissue, neuroma of nerve structure, etc. Cysts are also regarded as innocent tumours containing fluid or semi-fluid matter.

816. Malignant tumours have a tendency to destroy life if left untreated and to return if removed by operation. They may also give rise to metastases or similar tumours in other parts by transference of the casual agents through the blood or lymph circulation. The principal forms of malignant tumour are carcinoma or cancer and sarcoma, the difference between them being their ultimate cellular constitution distinguishable only by microscopic examination.

Twins **817**

Twin pregnancies occur on an average once in about eighty cases; triplets are found only about once in 6,000 pregnancies. Ireland has more twin births than England, the proportion being about two to one.

There is no foundation for the belief

that twins do not live long. If they survive the first few years they have as much chance of a normally long life as anyone born in a single pregnancy. But, of course, the mortality among twin infants is much greater.

Typhus Fever (Jail Fever) 818

This must be distinguished from typhoid, or enteric fever (*see* "Enteric Fever"). It is an infectious epidemic disease, attacking mostly poor and squalid neighbourhoods in which overcrowding, filth, and starvation are familiar features. Hence its rarity at the present day; but formerly it was a constant feature in barracks and gaols. Ireland has, in the course of her history, suffered grievously from typhus fever.

The chief symptoms are severe feverishness and a characteristic rash of a "mulberry" appearance, mostly on the chest and abdomen. Complications are particularly liable to occur.

It may be of interest to mention that the "Grand Army" of Napoleon which retreated from Russia was practically decimated by "typhus fever."

The treatment is not unlike that of enteric fever. It has recently been reported that tincture of iodine given internally in doses of 3 or 4 minims, in water, three times daily, has proved of great value.

It need hardly be added that isolation of the patient is the first essential in order to prevent further infection. During a recent epidemic in Serbia it was proved that the disease is transmitted by lice. Measures taken accordingly had the desired result.

Ulcer and Ulceration 819—820

Ulcer means an open and discharging sore, caused by loss of substance on the free surface of the skin or a mucous membrane, and ulceration means the formation of an ulcer. The causes of ulcer are inflammation through mechanical violence or chemical irritation, or in consequence of some internal or constitutional disease. There are several varieties of ulcer, according to the more immediate causation or the character of the wound. Thus we speak of tuberculous or syphilitic ulcers; of eczematous ulcers, which arise in the course of an attack of eczema; varicose ulcers, which form in connection with varicose veins, especially on the leg; or we distinguish simple or healthy ulcers which heal easily by the employment of rest and a protective dressing; fungous ulcers, which discharge pus and heal by contracting the surrounding skin, as seen, for instance, after burns; sloughing or phagedenic ulcers, which spread very rapidly and destroy much of the neighbouring tissue; indolent ulcers, which do not appear to be making any progress towards healing, and are mostly the result of continued irritation and neglect; serpiginous ulcers which heal in one place while spreading in another; and so forth. We also speak of gastric ulcers or ulcer of the stomach, and of rodent ulcer, a form of cancer.

820. Ulcers dependent on some constitutional disease must be treated by treating the original cause, but every ulcer requires frequent cleansing and dressing, as well as protection from outside injuries or from cold. If the discharge is foul, antiseptic lotions must be used freely, and the strength of the patient must be sustained by general tonics. Some ulcers require the application of caustic remedies, such as nitrate of silver, and in many instances skin-grafting becomes necessary.

Umbilicus (Navel), Diseases of 821—822

The navel is subject to various affections, the commonest being umbilical hernia or rupture. The scar gives way and permits a portion of the bowels to protrude. In newly-born children this happens rather frequently, and all the treatment required is to apply a pad and bandage to keep the bowel in position. A favourite method is to place in the baby's binder a coin or flat piece of cork. In rare cases this does not suffice, and an operation may become necessary.

822. Not only babies but many grown-up persons are troubled with a more or less constant discharge from the umbilicus. As a rule nothing more is needed than to cleanse the part with an antiseptic lotion at least once or twice daily. But if this is neglected the wound may become septic and a source of danger.

Uræmia (Uræmic coma) 823

A group of nervous symptoms—including headache, dizziness, ringing in the ears, dimness of sight, and afterwards convulsions, vomiting, and extreme drowsiness—which form, as a rule, the concluding stages of a fatal case of Bright's disease. It is due to the circulation in the blood of the poisonous waste-products which are generally eliminated with the urine. The arrest of the function of micturition in a patient suffering from Bright's disease is always a bad sign, as uræmia is sure to be the immediate consequence.

The treatment of an attack of uræmia consists of the administration of strong purgatives (such as the application on the tongue of a drop of croton oil, a 2-grain dose of calomel, a 20-grain dose of compound jalap powder) and hot baths. If the convulsions are severe, chloroform is given to allay them. The condition being one of extreme gravity it is hardly necessary to state that a doctor must be sent for at once.

Uric Acid Diathesis 824

By this term is understood a constitutional tendency to an accumulation of uric acid in the blood. The condition manifests itself first by the presence in the urine of an excess of urates as evidenced by considerable deposits of a "brick-dust" like appearance when the urine has stood a little while. This leads eventually to gravel or stone in the bladder, and is supposed to have an important bearing on the development of rheumatism and gout, chiefly the latter.

Whilst uric acid diathesis frequently causes no symptoms or inconveniences at all, it sometimes is accompanied by local disturbances, such as a frequent desire to micturate, a dull aching in the loins, a sense of irritation in the urethra, and even slight traces of blood in the urine, or by general complaints like flatulence and heartburn after meals, headache, and cramps. There may also occur complications of a nervous nature, including dizziness, neuralgia, etc.

The treatment of the condition will be found outlined under the heading "Gout." (*See also under* "Stone.")

Urine, Abnormal Conditions of 825—829

A healthy individual should pass daily on an average about fifty ounces of urine; anything very much above or very much below this quantity is abnormal. Nervous excitement increases for the time being very materially the quantity of urine passed, and so do certain foods and drinks, for instance, lemons, tea, gin,

etc. When a person has to get up often in the night to pass urine, although he has not drunk much liquid the day before, it is generally a sign that there is something wrong. (*See under* "Bladder, Diseases of.")

A diminished secretion of urine, not due to stricture, feverishness, or similar causes, is a symptom of kidney disease, unless the person in question takes very little fluid or perspires considerably. After diarrhœa, too, there is a diminution in the amount of urine passed.

826. The specific gravity of normal urine is 1020—a little more, or a little less. When it is much lower, it may be a sign of Bright's disease or of general break-up in an aged person. A high specific gravity is generally a sign of diabetes.

827. The reaction of normal urine is acid, but it may be alkaline after meals. It is highly acid in feverish conditions, especially in acute rheumatism. When normal urine has been standing for some time it undergoes fermentation changes and becomes alkaline and ammoniacal.

828. The urine may contain various abnormal constituents, of which the principal are albumin, sugar, blood, bile and pus, also epithelial cells. The presence of these can be ascertained by more or less delicate chemical tests or by microscopical examination of the deposit.

829. The most frequent cause of albumin in the urine (albuminuria, which see), is Bright's disease; that of sugar, diabetes; that of blood (hæmaturia) stone or tuberculosis of the bladder or of the kidneys; that of bile, disease of the liver; that of pus, abscess in the kidney or bladder; that of epithelical cells, disease of the kidneys.

Urine, Retention or Suppression of 830

The difference between retention and suppression of urine is that in the former, urine is present in the bladder and cannot be expelled (*See under* "Bladder, Diseases of"), whilst in the latter there is no secretion of urine by the kidneys either through disease or shock.

The treatment of suppression of urine by hot vapour baths, free purgation and diuretic remedies such as syrup of squills in half-teaspoonful doses, infusion of buchu in doses of one or two ounces, citrate of potash in doses up to 40 grains, caffein in doses up to 5 grains, etc.

Urticaria 831

Urticaria, or nettlerash, is an inflammatory eruption on the skin accompanied by much tingling or itching, which may be produced by external causes (for instance, bites and stings from insects, or hairy plants like the common nettle), or by the consumption of certain articles of food (for instance, shell-fish, mushrooms, strawberries, etc.).

Urticaria may also be caused by certain drugs taken internally or applied to the skin (*See under* "Drug Eruptions"), and very often the cause remains a mystery, when it is supposed that the nervous system is at fault in some way or another.

The eruption is sometimes, but not often, accompanied by signs of feverishness, and takes the form of wheals of various sizes. Besides removing the cause, if possible, and attending to the diet, the treatment is the same as described under "Itching." It may also be advisable to administer an emetic or a purgative.

Some cases in which ordinary treatment is not successful are now treated

by injection into the skin of normal horse serum.

Uvula, Diseases of **832**

The uvula, or little tongue-like projection which is suspended from the back of the roof of the mouth participates in all the diseases to which the throat and mouth are subject, but it is also subject to the condition known as "elongated uvula."

The consequence of an elongated uvula are a state of irritation of the pharynx, a constant tickling cough, and a tendency to vomiting. The patient always feels as if he wants to swallow something that is sticking in his throat. An efficient treatment is gargling with a solution of ammonium bromide, 20 grains to the ounce of water; but frequently it becomes necessary to have recourse to a surgical operation, and to remove a large portion of the offending organ.

Some persons are born with a divided uvula. The inconvenience is not very great, and treatment is seldom necessary. Where it is, nothing but an operation of some sort may do any good.

Vaccines and Serums **833—834**

The principle underlying the treatment of vaccines and serums is the introduction into the system of microbes or of substances produced with the aid of microbes. The idea is by no means a new one. For centuries it has been known in the East that inoculation with the lymph of smallpox gives a certain protection against being attacked by smallpox. Jenner in this country some 100 years ago found that persons who had caught cowpox through contact with animals suffering from it acquired a sort of immunity against smallpox which is only a severer form of the same disease. He worked this out with the result that vaccination became the recognised means of protection against smallpox.

On the same lines Pasteur many years later introduced the treatment of hydrophobia by inoculation with his serum, and thus by degrees we have reached the present stage of the method of treating with microbes diseases known or suspected, to be due to infection by the same microbes. We have now at our disposal vaccines and anti-toxic serums, the former being preparations of actual microbes, whilst the latter consist of the blood serum of animals previously rendered immune against the effect of certain microbes. The best known representative of the vaccines is tuberculin—with which many cases of consumption and other forms of tuberculosis are treated more or less successfully—and the best known serum is the diphtheria anti-toxin.

834. "Autogenous" vaccines are prepared from microbes derived from the sufferer himself—as mentioned, for instance, under "Boils."

Both serum and vaccines are introduced into the system by injections into the skin or direct into the veins. These injections sometimes cause "serum-sickness." (*See under* "Anti-toxins.")

I should have to enumerate a long list if I were to give the names of the diseases in which serum and vaccine treatment has been attempted, with more or less success.

Vaccinia (Cow-Pox) **835—836**

This disease is in reality a modified and much less severe form of smallpox. It affects in the first place animals and is transferred from them to human beings by contact or through

inoculation with the matter contained in the pustules. When so inoculated cow-pox is a protection against small-pox for longer or shorter periods. In rare cases it gives rise to eruptive vesicles in various parts of the body or to rashes similar to that of measles.

836. Vaccination is now affected by means of glycerinated calf lymph so that the dangers of infection associated with the old method of arm-to-arm vaccination are done away with. Unpleasant results after vaccination are rare and in the vast majority of cases due to want of cleanliness and neglect to protect the arm against injury. The ordinary slight effects are of temporary duration and generally disappear in the second week. The scab falls off in the third week.

Veins, Diseases of **837**

As already mentioned under the heading "Blood-vessels, diseases of," the veins are subject to a number of diseases, of which inflammation—or phlebitis—is a frequent one. This inflammation may gradually subside or it may turn into abscess. It is also possible for the vein to become thrombosed or blocked up, and this is rather a serious matter, as a portion of such a thrombus or clot may become detached—when it is called an "embolus," and get into the circulation. The embolus may reach the heart and cause sudden death. Hence the importance of rest in the recumbent position in the treatment of a case of phlebitis.

The veins are liable to various injuries and wounds, and these may become infected. A ruptured vein may also give an opportunity to an air bubble to enter into the circulation—with disastrous results. The treatment of these accidents is largely preventive, namely, disinfection of wounds and first-aid dressing.

One of the most frequent diseases of the blood-vessels is that known as varicosity of the veins.

A varicose vein means a vein which has become dilated through containing a larger quantity of blood than it should do normally, with the result that it assumes a tortuous form and a liability to burst.

A frequent complication of varicose veins is the occurrence of ulcers along their course. Varicose veins are also subject to thrombosis and phlebitis, but the chief danger to be apprehended from a varicose vein is hæmorrhage through its rupture.

Prolonged standing is one of the commonest causes of varicose veins, and so is excessive walking. That cycling has a tendency to aggravate and even to produce varicosity of the veins there can be very little doubt. I have already mentioned under "hæmorrhoids" that piles are practically varicose veins caused by sedentary occupations and chronic constipation. The habit of wearing garters is very largely responsible for the frequent occurrence of varicose veins of the legs in women.

Those who have varicose veins in the legs complain of fatigue and a sense of fullness in the limbs, especially after exercise; also of cramps, coldness in the feet, numbness in the legs and swollen ankles.

In a large number of cases the condition can be materially improved by the wearing of elastic stockings, or even ordinary bandages, and gentle friction of the legs with cold water in an upward direction. At the same time, the cause must be attended to. Where these remedies fail, or for purposes of enlistment, operations become neces-

sary; they consist in the excision of the whole or a part of the diseased vein.

As to the treatment af varicose ulcers it is like that of ulcers generally, but it requires much patience and perseverance, and not infrequently the aid of a surgeon.

Vision, Disorders of 838—839

Under the heading of "Eyes, Diseases of," I have dealt with a number of affections of the eyes which are due mainly to changes in particular parts of the organs of sight. Here I wish to say a few words on some conditions which are characterised principally by defects in the eyesight.

There is first the abnormality known as colour blindness. Some persons cannot distinguish between one colour and another, and they mistake, say, red for green, or *vice-versa*. The defect may be either complete, that is relating to all colours, or incomplete, *i.e.*, relating to one or two particular colours only.

To railway servants, sailors, and others, the matter is one of very great importance, as colour-blindness renders them unfit to carry out their duties free from danger to the public and themselves. The tests employed by the authorities are said to be too severe; but, much as one sympathises with men as individuals, the safety of the public demands the first consideration.

Colour-blindness is either congenital or acquired. The latter forms part of diseases of the brain or of the optic nerve. Very little, if anything at all, can be done in the way of prevention or treatment.

Long-sightedness (hypermetropia) is perhaps the commonest of the eye-affections known as errors of refraction and included in the term "ametropia." It is, as a rule, congenital and hereditary and shows itself in children when they begin to go to school or before. They complain of headache, pain in the eyes, weakness of the sight, and are seen sometimes to squint, especially when trying to read, write, or sew in artificial light. As a complication, inflammation of the conjunctiva may occur or there may be other symptoms.

838a. Short-sightedness (myopia) is also very often hereditary but unlike hypermetropia it generally commences at about or after the age of fifteen. The principal symptom is the necessity of having to bring close work immediately near to the eyes, and inability to distinguish things from a distance. A myopic person can generally be recognised by the habit of screwing the eyelids together and peering out of them when looking at an object not quite close to him. Myopia is said to be on the increase owing to the progress we are making in education. It certainly seems to be a fact that the decrease in the percentage of illiterate persons and the increase in the number of myopes go hand in hand; thus, the most literate country is also the most myopic. Perhaps one of the most important factors is the constantly growing number of readers of newspapers and other publications with unnecessarily small print. Another one is the habit of reading in trains and tramcars in motion, thus subjecting the eyes to double strain. It is equally bad to read in a dim light, or with the light coming from the wrong direction.

Astigmatism, another error of refraction, results, as a rule, from changes in the shape of the cornea of the eye, and also from other irregu-

larities. It is not so frequent as it is generally believed, but may be suspected when the vision is not corrected by ordinary glasses, and there is no organic defect in the eye to account for the bad eyesight.

Presbyopia or the far-sightedness which affects the eyes of all persons above the age of 40 or 45, is a defect of accommodation rather than of refraction, being due to loss of elasticity on the part of the lens. It shows itself in difficulty to distinguish things clearly unless held a longer distance away from the eyes than usually. Reading print of small size, say, the figures in time tables, sewing, or other close work, especially in artificial light, is found to cause trouble hithero unknown; generally the light is blamed, and it is quite a regular procedure to observe such people placing the lamp or candle between the eyes and the book, etc. Myopic or short-sighted people do not develop this presbyopia until much later in life or not at all.

839. All the defects in the eyesight mentioned so far can be treated successfully only by the wearing of suitable glasses. Myopic people require concave lenses, the degree of concavity depending on the extent of the myopia; hypermetropia and presbyopia necessitate the use of convex lenses, and astigmatism is corrected by cylindrical lenses. It is important to remember that unsuitable glasses or spectacles are sometimes the cause of severe eye trouble. Nor do the same eyeglasses remain suitable for ever, and since the defect for which they were obtained at first undergoes changes as time passes, they must also be exchanged at longer or shorter intervals. Hence the advisability of having the eyes examined by a competent eye-specialist—and an eye-specialist is not a person who sells spectacles, but one who merely prescribes the right sort—whenever the eyesight is not satisfactory, and the glasses worn do not correct the defect entirely.

The eyesight is sometimes deficient through impairment of the general health or as part symptom of nervous or other diseases. Anæmic young persons are also frequently troubled with eyestrain and weakness of the sight, although they are neither myopic nor hypermetropic. Under such circumstances, we speak of asthenopia, and the treatment must naturally be directed to the cause.

A common occurrence is the inequality of the eyesight in the two eyes. It is, for instance, quite possible for one to be normal and the other myopic or for one to be more myopic than the other. The condition is known as anisometropia, and can be corrected to some extent by the wearing of a monocle or suitable eyeglasses of different lenses.

Blindness of one eye does not throw double work on the sound one, as people generally believe. Vision with one eye only, is certainly less acute than with both.

Amaurosis denotes total or partial blindness, the cause of which is unknown. The term is not in much use now, though we speak of cerebral amaurosis when the blindness is due to disease of the brain, or of epileptiform amaurosis in connection with epilepsy. Sympathetic amaurosis is a partial blindness of one eye due to disease of the other eye.

Dullness of the eyesight known as *amblyopia* occurs after over-indulgence in tobacco-smoking and intoxicants and also through taking some

drugs, as, for instance, quinine, salicylic acid, etc. (*See also under* "Blindness," etc.)

Vomiting **840**

Here are a few hints on the meaning of some kinds of vomiting; others are mentioned elsewhere.

The commonest cause of vomiting is the presence in the stomach of indigestible, decomposed, or undigested food. When the vomit smells and tastes sour, the vomiting may be attributed to indigestion. If the vomit contains mostly mucus, the vomiting is due to chronic gastritis, and alcoholism should be suspected in the first place. Bile in the vomit suggests gallstones, or if the vomiting has come on acutely, the first stage of obstruction of the bowels. Fæces in the vomit (the so-called "miserere!") is a sign of obstruction of the bowels in the later stages. Blood in the vomit in a young person suggests ulcer of the stomach, in an older person cancer of the stomach or cirrhosis of the liver. Pus in the vomit means that an abscess in the œsophagus or in the stomach has burst. Very profuse vomiting is generally a sign of dilatation of the stomach; it does not occur until some time after a meal. Vomiting due to disease of the brain comes on soon after food and occasions neither retching nor pain. In children, vomiting, apart from meals, may be looked upon as a sign of a coming eruptive fever. Vomiting during pregnancy is a common occurrence.

The treatment of vomiting depends naturally upon the cause, but a safe rule in every case is to withhold food for a few hours at least altogether and to resume an ordinary diet by stages only.

Warts **841**

Warts are small growths on the surface of the skin, and, like corns are frequently due to constant pressure or irritation, though in many cases no cause can be discovered. They often disappear without any treatment. Or they may be snipped off with the knife or scissors after taking antiseptic precautions. Sometimes it is sufficient to ligature them at the bottom with a stout thread, when they generally shrivel and fall off in a few days. Destruction by caustics, like acetic acid, nitric acid, or nitrate of silver, is rather painful, and should be avoided, if possible.

Satisfactory results may be obtained from the careful application to one wart at a time of a 40 per cent. solution of formaldehyde. This should be done with the end of a match every three or six hours for two or three days.

In some cases chrysarobin ointment —10 per cent. strong—is very effective in removing warts of all kinds. It is, however, objectionable on account of the stains it produces, though they may to some extent be removed by benzol, a weak solution of potash or chlorinated lime.

The suggestion has recently been advanced to treat warts by the simple method of covering them with caoutchouc plaster and leaving them so covered for weeks or even months, renewing the plaster every now and then and each time removing the residue of caoutchouc with the aid of a little ether or petrol. But the surrounding skin must not be rubbed too vigorously. I have tried the method once or twice with satisfactory results.

Where there is a tendency to chronic formation of warts, the internal administration of Epsom salts daily,

acts sometimes beneficially. In other cases lime water taken in quantities of as much as half-a-pint daily is found exceedingly useful. Another method of internal treatment is with thyroid extract.

Water-Brash (Pyrosis) **842**

This is a symptom of indigestion similar to heartburn. The patient feels a spasmodic pain in the pit of the stomach, and after a little while experiences relief by bringing up a quantity of somewhat sour fluid. Women are more subject to it than men, perhaps, because they are greater offenders in the matter of tea-drinking. Lime water is a good remedy, or a powder of bismuth carbonate, 5 or 10 grains, may be taken soon after food. Liquids should be drunk after meals.

Weakness, General **843**

General weakness or debility is a symptom of many diseases; but it is often constitutional or inherited, and in that case one cannot do much except keep away from the individual concerned all damaging and injurious influences. People constitutionally weak do not, as a rule live long, as they generally succumb, for want of resisting power, to illnesses from which normally strong persons recover in most cases. Those who, in popular language, are in a state of decline are the individuals to whom these remarks apply chiefly; but many use the term "decline" as a synonym for "consumption."

The general debility which follows long illnesses, or which is the result of overwork, either physical or mental, is successfully combated by rest, fresh air, and good nourishment.

Tonic medicines are useful helps, but they cannot take the place of rest and food.

Whitlow (Paronychia) **844**

Though the term whitlow is used in connection with all inflammations of the fingers and thumbs which tend to turn into abscesses, it really means an inflammation of the tendon sheath which lies close to the bones. The deeper a whitlow is situated the more painful it is. The more superficial whitlows can usually be treated successfully by hot applications, but those situated nearer to the bone require, as a rule, an incision and drainage.

Whitlow is one of the diseases treated successfully by the so-called hyperæmic method of Bier, the object of which is to produce congestion of blood in the part affected. The explanation is that an increased amount of blood exercises greater destruction among the bacteria present in the diseased area and thus hastens a cure. The congestion desired can be obtained either by the application of constricting elastic bandages or by cupping-glasses (*see* "Cupping") and also by subjecting the diseased part to the action of over-heated air. A word of warning is, however, necessary. If the constriction, for instance, is too tight, gangrene may result through complete arrest of the circulation. In the case of whitlow there is a means to guard against danger in the feeling of the pulse at the wrist. The bandage must not cause the pulse to stop.

Whooping Cough (Pertussis) **845**

This well-known children's disease lasts, as a rule, from eight to ten weeks, and is often fatal in the case of delicate infants under two years of age. Girls appear to be subject to it

more than boys. Real whooping cough is a contagious disease caused by bacteria, the infection taking place through contact with a patient's expectoration either directly or indirectly through the medium of clothes, etc., or of a domestic animal like a dog or cat.

Many mothers think their children suffer from whooping cough when they suffer from bronchitis, or a cold accompanied by a cough. It is, therefore, important to know that whooping cough does not generally occur otherwise than in epidemics, and only when a child is known to have been in contact with other children suffering from whooping cough is it likely that it is affected in a similar way. Besides, the crow of whooping cough is quite characteristic. Several short, spasmodic attempts to cough are followed by a long and peculiar drawing-in of the breath which often ends in vomiting.

Whooping cough is liable to various complications which make it a serious disease, the most frequent one being pneumonia. It frequently leaves behind a troublesome chronic bronchitis which may continue for many months.

In the early stages a child with whooping cough should be kept in a warm and well-ventilated room, though not necessarily in bed. To relieve the paroxysms, tincture of belladonna in doses of from 2 to 5 minims—according to the age of the child—may be administered cautiously, or bromoform in equal doses forms a reliable remedy. It may be given mixed with a little almond oil. Treatment by vaccines has been tried, but so far not with much success.

The sick-room should be impregnated with antiseptic vapours, such as carbolic acid or eucalyptus oil.

When the cough has subsided the child should have a change of air, or be in the open as much as possible. Cod-liver oil and Parrish's food are then of the greatest assistance in re-establishing the normal health.

Whooping cough not infrequently attacks adults and even old people. It is commonest in children under five years of age. One attack generally makes them immune against subsequent attacks, but in rare cases this rule does not seem to apply. Some cases do not respond to treatment at all and then one must wait patiently till the disease exhausts itself. Alarming as the paroxysms appear to the onlooker, and pathetic as it is to see the frightened child flying to its mother or nurse when it feels an attack coming on, there is really no danger of suffocation. Even the exhaustion soon passes away.

Medical advice should be obtained with a view to preventing complications, especially in the case of delicate children.

Wife or Husband, Selection of 846

Doctors are often asked questions relating to the suitability of certain persons with a view to matrimony. Many want to know, for instance, whether they may marry a man or woman who is, or has been, troubled with some disease or other, or whose relatives have suffered, or are suffering, from a particular illness, either physical or mental.

It is impossible to lay down general rules, each case having to be decided on its merits. It is always advisable, when one is in doubt on the matter, to consult a doctor and to put all the facts before him. This simple precaution would undoubtedly prevent a

great deal of domestic unhappiness and much disease.

Here I wish to say a word or two with reference to marriage and consanguinity or marriage between near relations, say, cousins, seeing that questions very frequently arise on this point. Whilst as a general principle such marriages are not desirable or worth encouraging, they are not all to be condemned without a consideration of the circumstances. Where there have been such diseases in the family as cancer, nervous troubles, epilepsy, or insanity, the marriage is to be prohibited without any hesitation; otherwise, much depends on the state of health of the young people concerned and on that of their respective parents. Where it is satisfactory all round there is on principle no objection to the contemplated marriage. Where the conditions are the other way, it is best to abandon it.

I may also mention that I am not in favour of marriages between "May and December"—that is, where the difference in the ages of husband and wife is more than, say, ten or twelve years—the husband being the "senior partner." The wife should never be older than the husband by more than a year or two, at the most.

I heartily approve of men marrying when they are in the early twenties—provided they can afford it.

Worms **847—851**

In medical practice this term applies chiefly to intestinal worms, namely, threadworms, roundworms, and tapeworms.

A tapeworm may attain extraordinary dimensions and remain in the bowel for many years without causing any real inconvenience. It is generally swallowed with food or drink in the form of little cysts which contain the worm in embryo, and which develop in due course into a complete tapeworm. There are three kinds of tapeworm: the commonest is that known as tænia solium, which is derived from pork insufficiently cooked; tænia mediocanellata which occurs in beef, and the botriocephalus latus, found in fish. Each tapeworm consists of a head and numerous segments, the larger ones forming the tail and becoming smaller as they get nearer the head.

Where people are in the habit of eating meat or fish in the raw state or underdone, tapeworm is comparatively of much more frequent occurrence, as, for instance, in Germany.

In most cases, people find out that they harbour tapeworm when they begin to notice portions of it in the motions, and this is, indeed, the only reliable sign. Sometimes, however, there are more or less obscure symptoms, such as colicky pains in the abdomen, a voracious appetite, itching at the nose or at the anus, headache, giddiness, and even hysterical or epileptic convulsions.

Under such circumstances it is advisable to administer a strong purgative and to examine the motion with a view to ascertaining whether tapeworm segments are present. That being found to be the case, the treatment consists in the administration of a dose of liquid extract of male fern, say a teaspoonful, or a teaspoonful and a half, with a little tincture of senega and water, or in the form of gelatine capsules. The drug should be given on an empty stomach after the bowels have been opened by a dose of castor oil, and it should be followed in about three or

four hours by another dose of castor oil, or some other efficient purgative.

The tapeworm having come away, its head—about as big as a pin's head—must be searched for, as unless that has come away, too, the cure is not complete, and the tapeworm rapidly reforms. In that case the best plan is to watch for the reappearance of fresh segments—as it is quite possible the head may have eluded observation—and when they do reappear to repeat the treatment given above.

Of other favourite remedies, oil of turpentine forms one, in doses from half to two ounces, followed immediately by a purgative.

Those who cannot take either of these two remedies may try instead from one to four tabloids (two to eight grains) of pelletierine tannate. The manner of taking it is the same as with extract of male fern.

848. Threadworms — called also seatworms—are situated chiefly in the rectum, or lower bowel, and for that reason the chief symptom they give rise to is heat or itching at the anus, especially at night when the patients—mostly children—get warm in bed.

Threadworms look like small white shreds and are seldom longer than half an inch, the tail ending in a sharp point. They are called oxyuris vermicularis.

Apart from what has been said, the presence of threadworms may cause similar obscure symptoms to those occasioned by a tapeworm. Parents often suspect worms from the habit of children to poke the nose with the finger and the suspicion is frequently justified. But here, too, actual seeing of the little pests is the only reliable sign, and to make sure, a purgative may be given when some will be expelled with the stools.

The treatment for getting rid of threadworms is a simple one. The lower bowel should be washed out daily with enemata of salt water or strong infusion of quassia chips. A solution of alum—4 to 10 grains to the ounce—also make an effective injection for the purpose. But sometimes, especially in adults, this does not succeed to expel the worms completely. In that case, food should be taken containing plenty of salt and a santonin powder, in doses from one to two grains—children should not be given more than the smaller dose—given at night time, followed the next morning by a dose of castor oil or some saline aperient. The santonin powder may as an alternative be given with an equal dose of calomel.

849. Roundworms (ascaris lumbricoides) inhabit as a rule the small intestine. They resemble ordinary earthworms, being pointed at both ends and may attain a length of 12 inches or more. Frequently one of them is vomited out and this is the first sign of their presence, because as a rule there are a number of them. The symptoms which roundworms produce may be more distinct than those of the other varieties of intestinal parasites and include vomiting and diarrhœa, a foul breath, abdominal pain and general restlessness, but only the expulsion of a worm either through the mouth or the rectum can confirm the diagnosis.

When one or more worms have come out it is safer to assume that there are some more to come yet and to institute the necessary treatment. It consists in abstention from food for from 12 to 24 hours and the subsequent administration of santonin in doses of from 2 to 5 grains at night-time—according to age—followed next morning by a good dose of aperient,

preferably castor-oil. In some people santonin, even in small doses, has the effect of producing yellow vision—everything appearing of yellow colour—and yellow discoloration of the urine. The first dose should therefore be smaller rather than larger, and it is preferable to give two or three such smaller doses at intervals of two or three days rather than one large one.

As alternatives to santonin I may mention naphthalin in pill or cachet form (dose from 2 to 15 grains) and thymol. (*See above.*)

850. Other intestinal parasites include: Anchylostomum duodenale—a small worm inhabiting the duodenum and giving rise to severe forms of anæmia and indigestion. Anchylostomiasis—the condition which it produces—is not very frequent in England, though cases occur among the miners in Cornwall, but it is common among miners and tunnel-workers in other parts of the world, notably in Eygpt, Italy, Brazil, and Jamaica, from where it is apt to be brought home by soldiers and sailors. The infection takes place through the medium of the evacuations so that preventive treatment is of the greatest importance. Workers subject to the risk of swallowing the worms with their food and drink must be very careful to wash their hands free from all soil; water should not be drunk unless previously boiled. The opinion also exists that the worms may find an entrance into the blood circulation through cracks in the skin of the sole of the foot, which suggests that strong boots are a matter of necessity.

As to removal of the worms from the intestines, the usual remedy employed is thymol, but male-fern also renders good services. (*See* above for methods of administration.)

A similar condition is brought about by the presence of what are known as hookworms (uncinaria, uncinariasis), indeed, it is nothing but a modification of anchylostomiasis. In both, the diagnosis can be made only by finding the typical eggs of the worms by a microscopical examination of the stools. The treatment is the same.

851. The disease known as "hydatid disease" is characterised by the presence in various parts of the body, particularly the liver, of little cysts containing the embryo of a kind of tapeworm called "tænia echinocuccus." The infection is generally transferred from dogs to man and the disease is largely prevalent in agricultural countries, especially in Australia.

The cysts may develop into large tumours or they turn into abscesses so that the treatment of the disease is purely surgical.

Various other parasitic worms, such as the trichina spiralis, filaria, etc., have been mentioned under other headings, and as regards others of greater rarity, what has been said so far applies equally to them both in respect to symptoms and treatment.

Wounds 852

The principles in the treatment of all wounds are to arrest hæmorrhage, to prevent blood-poisoning and to bring several parts together so that there may eventually be complete healing.

First-Aid generally accomplishes the first of these essentials, the second and the third are the object of subsequent treatment.

All wounds should be disinfected as soon as possible by cleansing and removal of all external particles such as dirt, bits of clothing, etc., after

which antiseptic dressings, and other necessary aids are applied. (*See under* "Antiseptics," "Disinfectants," etc.).

We distinguish incised wounds, in which the parts are divided by a cutting instrument; lacerated wounds, in which the muscular fibres are torn across and the whole area is bruised and which are liable to complications, such as gangrene, septicæmia and tetanus; contused wounds in which there is much disorganisation of the part affected and which are caused by a blunt object applied with great violence; punctured wounds which are inflicted by pointed weapons; penetrating wounds which enter some organ like the lungs or the liver; open wounds which open externally on the surface; poisoned or septic wounds, into which septic mater has entered, etc., etc.

A wound inflicted during life generally shows that there has been some hæmorrhage, or it exhibits signs of commencing healing or gangrene. If these signs are absent, the wound was probably caused after death.

Gunshot wounds are now treated in many respects differently than in former times. No probing is, as a rule, allowed, the location of bullets being ascertained, if necessary, by the X-Rays. Tincture of iodine is proving an excellent preventive against septic infection, and many bullets are being extracted with the aid of a strong magnet.

A wound is said to heal by First Intention if its edges meet accurately and grow together without the intervention between them of a granulation surface. Healing by Second Intention takes place when such a granulation process fills the gap between the edges of the wound. Healing by Third Intention is provoked by bringing the edges together by means of stitches when there is granulation forming between them.

Wrist-Joint, Diseases of **853**

The wrist is subject to sprains and dislocations with or without fracture. There may occur inflammations of the tendons running over the bones of the wrist, and rheumatism in the wrist is quite a common illness. In lead-poisoning the wrist is liable to the condition known as "wrist-drop." The wrist is also subject to tuberculous disease, like any other joint. The little swellings over the wrist known as ganglions have been discussed under the latter heading.

Writer's Cramp (Scrivener's Palsy) **854**

This is a frequent symptom in those who have a great deal of writing to do. It is felt at first as a slight aching or strain, which is eased by laying aside the pen. After a while the act of writing is accompanied by contractions or spasms in the thumb and fingers, which grow in extent, making writing impossible. Or the hand trembles when writing is attempted.

Similar symptoms are observed sometimes in telegraphists, violin players or pianists, and since the typewriter has come so much into use one occasionally hears of "writer's cramp" in typists.

As it often means the loss of one's livelihood, the complaint is a very serious one indeed, particularly as no improvement can be obtained without giving the hand and fingers the complete rest they want for at least two or three months. Appliances, such as bracelets to carry the pen from the wrist, with the fingers more or less passive, have been tried, but with very little real success. On the other hand,

electricity and massage are sometimes beneficial.

Wry-Neck (Torticollis) 855

Wry-neck means a twisted condition of the neck to one side or the other. The condition may be congenital or acquired. The former is generally the result of an injury to the muscles of the neck, especially the sterno-mastoid, which has taken place at birth, and can be corrected by a suitable operation. The latter may be occasioned by muscular rheumatism of the neck ("stiff-neck") of long standing, or due to a disturbance in the nervous mechanism.

The form of wry-neck known as spasmodic is one which often makes life absolutely unbearable. The patient is constantly turning his head and twisting his neck in a spasmodic manner, being hardly able to keep still for a moment.

As the sufferers are generally men in the middle period of life, the chances of recovery are very slender indeed. Various operations, involving the muscles and nerves of the neck are often resorted to with more or less success. Electricity is occasionally followed by fair results.

Being regarded as a psycho-neurosis (*see under* "Hypnotism"), spasmodic wry-neck is now frequently treated by psycho-therapy.

Xanthoma (Xanthelasma) 856

Little swellings similar to those described under "Eye Diseases" as xanthelasma occur also in other parts, especially on the neck, trunk, and extremities. Nothing can be done except to remove them by operation, and the better course is to leave them alone.

Xanthomata occur also in people suffering from diabetes.

Yawning 857

Yawning is generally an indication of bodily fatigue, but the process is very little understood, especially the reason why it is infectious.

Sometimes nervous persons experience a succession of yawns of so violent a nature as to apprehend a dislocation of the jaws, though in fact this happens very rarely. Treatment is seldom called for, except that attention must be directed to the general health. (*See* "Spasms.")

Yellow Fever 858

This contagious disease is not seen in these islands except when imported from abroad is some isolated cases, but it is prevalent in the West Indies, in West Africa, and in North and South America.

The symptoms are not unlike those of malarial fever, with the addition of severe jaundice and frequent vomiting. Hæmorrhages take place from the nose, mouth, and gums, and the patient soon becomes delirious or comatose. The chances of recovery are not very bright, especially in those cases in which the temperature is very high and the secretion of urine very scanty and albuminous. Still, many of the patients do recover, thanks to good nursing rather than drugs.

Since it has been established that mosquitoes carry the infection from individual to individual, thus being responsible for the spread of yellow fever, and measures have been taken to clear infected regions from mosquitoes, countries and districts which used to be called "white man's graves" are gradually becoming habitable.

SPECIAL APPENDIX

HEALTH IN THE HOME

(CONTENTS OVERLEAF)

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Preparing for Motherhood

PERHAPS, first of all, I had better say a few words to those wives who are anxiously longing for a sign that they are on the way to motherhood, but to whom that sign refuses to come.

There are several possible reasons for this. Perhaps you have let yourself get a little out of health. Possibly you have not been getting enough fresh air and exercise and have allowed yourself to become constipated. Very likely it is some quite small thing that is preventing you from realising the wish of your heart.

Make sure, too, that your husband's general health is good.

But if you are sure that you and he are both healthy and well, and you have been married some time—say a couple of years—without any hope of a baby, then it would be as well to go and have a talk with your doctor. He will make a simple examination, and may possibly find that there is some small thing wrong that is preventing conception, and which a slight operation can put right. If this is the case, you will be wise to have that operation—it is not at all a serious matter and numbers of women find it necessary—and renew your hopes.

When Will Baby Be Here? How To Count Up.

Next, mothers-to-be, let me tell you how to find the probable date of your confinement. Take the date of the beginning of your last period, add seven days, and then count on nine calendar months. For instance, if your last period began on September 1, add seven days, which brings you to September 8, and then count on nine months to June 8, which is the probable date of your confinement. Nobody can be quite certain of the time to a day, but baby is likely to arrive within a few days of June 8, either before or after.

For those of you who are not, in the ordinary way, very regular with your periods, the calculation is more difficult, and a mistake is often made. Sometimes, too, a slight period occurs after conception, and this makes it hard to be certain when baby actually started on his journey. In these cases the only thing to do is to wait for the quickening, which occurs soon after the fourth month of pregnancy. When this happens, you will be able to fix your date with a greater degree of certainty.

But, however confident you may feel that your calculations are correct,

and that you know the approximate date at which you may expect to welcome your little stranger, do not put off beginning your preparations. It is possible that, after all, you are mistaken in your date, or baby may arrive before his time, and there is much to be done. You will, I am sure, want to make all baby's little garments with your own fingers. Begin in good time, so that without haste or flurry you may have everything ready and waiting by the end of the sixth month at latest.

RULES OF THE ROAD

For the Safety of the Traveller, Warnings are placed on Every Road to Mark Dangerous Corners, Cross Roads, Etc. These are the Warnings on the Road to Motherhood.

The First Rule

The first important rule of the road for the traveller on the way to motherhood is *Diet.* Perhaps you are the lucky possessor of a good digestion, and have never been accustomed to give much thought to the question of what you should eat. But even so, you must think now—for there is a tiny body to build up, and the right materials, and the best ones, must be used.

The meals taken by an expectant mother should be small and easily digested. The idea that you must "eat for two" is a fallacy. Three well-balanced, light but nourishing meals—breakfast, dinner, and supper—should be taken, and, in addition, some fruit or a drink of lemonade at eleven, a cup of tea with bread and butter or buscuits at four, and, if you feel inclined, a cup of hot milk or cocoa at bedtime. Avoid rich foods, overmuch meat, or twice-cooked meat, or anything which is a strain on the digestion. And remember—plenty of fresh fruit and green vegetables is the best possible diet for you. Try to arrange that you have fruit, salad, or some form of green vegetable at every meal.

While I am on the question of your diet, I may appropriately discuss that tiresome discomfort that most mothers-to-be meet with on their journey, morning sickness. This generally begins about a fortnight after the first period has been missed, and continues for from six to ten weeks. Although morning sickness is a difficult thing to cure entirely, there are one or two little things you can do to make matters more comfortable.

A glass of sweetened orange juice at your bedside, which you can sip about twenty minutes before you get up, is often a help. Or a cup of tea and a biscuit, taken slowly, may tend to check the sickness. In cold weather, if you have a gas fire in your room, get it lit early enough to take the chill off the room before you rise. Warmth helps to prevent, or at any rate to shorten, the feeling of sickness.

Another thing to do is to dress very slowly, taking as long as you like about it. It is well worth getting up a few minutes before your ordinary time to allow yourself the luxury of being thoroughly slow in your dressing.

The sickness should be over by breakfast-time. If it is incessant, or persists through the day, you should consult your doctor. But do not try to improve matters for yourself by the taking of an aperient, unless you are quite sure you know the best sort to take. Strong purgatives are not good for your while you are pregnant, and

might even cause the wrecking of your hopes. Senna tea, made with cold water, is the safest thing you can take, or, if you are inclined to be constipated, a dose of liquid paraffin every night will have no ill effects.

Another annoying symptom that may appear during the early stages of your journey is a slight form of bladder

A cup of tea and a biscuit, taken slowly, may tend to check the sickness.

trouble. You will find that you require to pass water much more frequently than usual. To cure this, the best thing you can do is to drink large quantities of water or barley water. The latter, flavoured with lemon, is a very pleasant drink, and you will find that you can easily take a quart of it daily. It is a good plan to make a big supply of barley water and keep it handy, so that whenever you feel you can drink some of it, it is there waiting for you.

Neither stout nor any other form of alcohol should be drunk at all, while baby is on the way, as it is not at all good for him.

The Second Rule

The next big rule of the road to motherhood is *Cleanliness.* Cleanliness, of course, is always important to health, but during these months of pregnancy it is doubly so. If possible, you should have a daily, tepid bath, with a brisk rub down afterwards that will make your skin glow. If you have not the luxury of a bathroom, still be sure to sponge yourself all over every day. The warm water opens the pores of the skin and thoroughly cleanses it.

Be very careful of your teeth. Brush them thoroughly night and morning, to be sure that no particles of decaying food remain in them and set up poisons which will be injurious to both you and baby. As soon as you have discovered that baby is on the way it is wise to visit a dentist, to make sure that all is well, and if he finds anything amiss, let him put it right at once. It is quite a mistaken idea that it is dangerous to have your teeth attended to while you are pregnant. The danger, on the other hand, lies in allowing the mischief to go on.

The Third Rule

Rule number three as you journey towards your heart's desire is *Exercise.*

In my experience, young mothers-to-be are inclined to be too chary of taking exercise during the first few months of their journey, and to over-emphasise the necessity of resting.

Exercise keeps the muscles of your body in good trim, and prevents them from getting fat and flabby, so that, at the end of your journey, when the time comes for your confinement, your body is fit and ready to do the work required of it. Sensible and regular exercise of your muscles, during the months preceding confinement, will do more to ensure easy labour, with the

Part of your daily exercise must certainly consist of a brisk walk in the open air.

minimum of fatigue and pain, than anything else you can do.

The amount of exercise you take during your journey must depend, to a great extent, on the amount of exercise you are in the habit of taking. Fresh air is, of course, all important, so part of your daily exercise must certainly consist of a brisk walk in the open air. This daily walk should be at least two miles—more if you are habitually a good walker—and should be partly uphill. Walking uphill is a wonderful strengthener for the tummy muscles. You will be surprised to find how they begin to tighten up after you have been doing it regularly for a little while. It is the tummy muscles which will later on have the hard work of pushing baby out into the world, and if you allow them to be weak and flabby they will not have enough pushing power, and will not do the work quickly. This means that your labour will be long and difficult, when, with a little wisdom and forethought, you might have made it easy.

Besides your daily work, a few simple exercises will be useful to you. On pages 311, 312 and 313 of this book you will find five exercises described, with sketches, all of which are suitable for you to perform daily, right up to the end of your time. Of course, in advising these exercises I am speaking to mothers-to-be who are normally healthy. If you have any weakness, or any reason to suspect that you ought to be more careful than is usually necessary, you would be wise to consult your doctor before attempting the exercises, or, at any rate, the more strenuous of them.

Then there are other forms of exercises which may be continued, if you are accustomed to take them, while baby is on his way.

Cycling, for instance, is good up to the sixth month, so long as you go carefully and not too far. Tennis, too, can be played in moderation, and not too strenuously. Bathing, during the early months, is excellent. But do not bathe soon after a meal, or on a cold day, and do not stay in the water more than a few minutes.

In all forms of exercise, one thing is important: *Do not allow yourself to get overtired.*

The Fourth Rule

Next after the rule of Exercise I may well give you the rule of *Rest.*

I cannot impress upon you too strongly the importance of not overtiring yourself. More disappointments

have, I suppose, been brought about by over-fatigue, during the early months of pregnancy, than by any other cause.

A few minutes' rest as soon as you begin to feel tired is a far better plan than waiting till you are thoroughly fatigued and then taking a longer one. Try so to arrange your day, both as regards work, pleasure and exercise, that you are not rushed. Then, as soon as you feel the bogey of fatigue creeping upon you, you will be able to spare a little while to sit down, preferably with your feet up, until it is banished.

Every afternoon, after your midday meal, you should set aside a regular half-hour or so for a real rest. Sit in a comfortable chair, with your feet upon another one, in a freshly aired room—or, better still, out of doors if it is warm enough—and relax thoroughly with a book or some sewing.

But, of course, the most important rest of all is at night. There should be no late hours during this time of waiting. Early to bed, in a well-aired bedroom, and a long, deep, refreshing sleep of eight or nine hours, is a wonderful health preserver, both for you and baby, as you travel on your way. To ensure this healthful sleep, avoid heavy meals and all forms of excitement just before bedtime.

Remember that the rule of Rest should be specially observed at those times when a period would normally be due. It is then that a miscarriage is most likely to occur.

The Fifth Rule

The Fifth and last rule that I am going to give you is *Cheerfulness.*

It is so easy to let yourself get depressed. You feel tired and not quite well, and the months of waiting stretch drearily before you—and perhaps some well-meaning but foolish friend scares you with exaggerated stories of the troubles and dangers of pregnancy But remember, for baby's sake as well as your own, you must keep cheerful. To give way to depression makes life hard for you both. As soon as you feel gloomy thoughts hovering around you, find something to do, or an interesting story to read, and keep them at bay.

You must have your things ready before the time of your confinement.

The Most Important Time

When a house is being built, the first care of a good builder is to see that the foundations are strong and well laid. It's the same with the building up of a little life. During the first months of pregnancy, the foundations of that little life are being laid, and it

is of enormous importance that this should be properly done.

There are two mistakes that may be made by the mother-to-be who is anxious to do her best in these early days for the child who is deriving its life from her. She may think, "This is a normal thing that is happening to me, and I can go on leading my ordinary life exactly the same as usual and not think anything about it."

This is a mistake. Normal though the process is, there are certain precautions that must be taken, certain rules that must be obeyed, now that you have two people to consider instead of yourself alone.

The other mistake is to think too much—to imagine yourself so fragile that you must set your ordinary life aside and behave as an invalid. This, too, is a mistake, and, if persisted in, will weaken and enervate you until it leads you into that very state of invalidism which it is so important you should avoid.

Making Your Plans

Begin Your Preparations in Good Time

As soon as ever you are sure that your little one is really on the way, you should begin making plans for his arrival.

First of all, you must decide whether you will have baby in a hospital or nursing home, or whether you would prefer to welcome him in your own home.

I think myself that in ordinary circumstances it is easier and better to go to a hospital or nursing home. Hospitals are planned on purpose, with everything ready and comfortable and convenient, whereas in your home there is much preparation to be made and difficulty to be faced. If you live in a town, it will be easy for you to go to a hospital in the early days of your pregnancy, and interview someone who will take all particulars, instruct you what to do, and tell you on which days to attend.

Staying at Home

But if you live far away from any hospital or ante-natal clinic, or if for any other reason you decide that it will be better to have your confinement in your own home, the best thing to do is to interview a nurse, make all your plans with her, and arrange that she shall attend you when the time comes. She will, of course, be able to give you detailed advice about your preparations and the clothes you will need for baby.

Besides the clothes, there will be some other things that you must have ready before the time for your confinement comes.

Nurse will need a pound of cotton wool, the white kind; a packet of safety pins; a jar of vaseline; four clean towels; a pail, and two basins. Large pudding-basins or pie-dishes will do for these, if they have been well scrubbed out. She will also require some disinfectant, but she will tell you what kind to get, and a small bottle of olive oil.

You should also provide two large packets of sanitary towels and a large macintosh sheet for your bed. These are rather expensive, so if you would rather, get a large sheet of tarred paper, or even a sheet of the thickest brown paper. A piece of old linen or a draw sheet will cover this up.

If possible it is wise to have everything completely ready by the end of the sixth month. For one thing, you will have felt well and energetic enough to do the preparing, if you

Exercise 1.

undertake it during the early months. And for another thing, if by any chance baby should make his appearance before he is expected, everything will be in readiness, and you will not be obliged to get someone else to buy your things, all in a hurry, instead of having the pleasure of choosing and making them for yourself.

Seeing the Doctor

All through your time of waiting you should see your doctor once a month, and during the last two months he will probably want to see you oftener still. Perhaps some of you will think this unnecessarily fussy—and, of course, in most cases all the doctor will have to say will be "Going on perfectly well." But all the same, it is a very wise precaution. Supposing something is beginning to go wrong—for instance, supposing your kidneys are not doing their increased work well enough, and poisons are beginning to filter into your blood—the doctor will detect it even before you could yourself, and will treat it at once, before it becomes serious or has a chance to develop. A regular visit to her doctor, during her pregnancy, has saved many a mother-to-be unnecessary suffering and the loss of the baby she is hoping for.

Towards the end of your time, the doctor will examine you to make sure that baby is lying in the right position. He ought to come into the world head first, but, as you will have found out, he is a restless little person and sometimes kicks himself into a position that would make birth difficult. If this has happened, doctor will turn him round, and make sure that he remains in readiness to come into the world as easily as possible.

So you will see that it is very important to see your doctor regularly, and especially during the last few weeks of your journey on the road to motherhood.

Exercises for the Mother-To-Be

It is by keeping the muscles of your body in good training that you can do more to ensure an easy, normal confinement. No athlete would attempt to enter a contest without plenty of preparation, and it is by Exercise that you can best prepare yourself for the contest that lies before you. Here are five helpful Exercises for you to practice daily.

The exercises given on the next page

Exercise 2.

Exercise 3.

will help you to get your muscles ready for the work that will be required of them during your confinement. It will take you all the nine months to get some of these muscles into really good condition, but a few minutes daily spent upon these exercises will help wonderfully in the preparation.

First, a few words of caution. The exercises should be done with very little clothing on, and should, therefore, not be done in a chilly room, or you may catch cold. You must not be too energetic over them, especially if you have not been in the habit of doing your "daily dozen." Begin by easy stages—one exercise only, just at first, then add another, and so on. And stop at once if you feel they are tiring you.

Also, as I said before, unless you are normally healthy, or if you have any special weakness, do not begin them without first consulting your doctor.

Exercise 1.—Stand straight with your feet together and your hands on your hips.

Turn your body as far as you can to the left. (Pause.) Turn back to the front. (Pause.) Turn as far to the right as you can. (Pause.) Turn back to the front. Repeat this from six to ten times, or until you feel tired.

Exercise 2.—As well as doing this exercise among the others at a stated time, you can repeat it during the day, whenever you have a few moments to spare.

Stand up straight, with arms extended, take a deep breath, and let it out again slowly.

Then pull in the abdominal muscles until they are thoroughly tightened up and you feel as if your tummy were almost touching your backbone.

Hold yourself thus for a second, and then relax. Repeat this from ten to twenty times.

Exercise 3.—For this you will need to take careful balance. Stand straight with your hands on your hips. Slowly raise one knee as far as you can, and slowly lower it again. Then stand on the other foot and repeat with the other knee. Be careful to keep your back straight all the time. Repeat this about ten times.

Exercise 4.—This is a more strenuous exercise, and should not be attempted until the first three have been practised for some days. Stand with your legs apart and your arms raised above your head. Swing your arms forwards and downwards between your legs, bending your body, but not your arms or knees. Swing back into the original position. Repeat six times.

Exercise 5.—This also is rather strenuous. Stand straight, with your heels together and your hands on your hips. Raise up on tiptoe.

Exercise 4.

Sink slowly down into a squatting position, with body erect and knees apart, until you are almost sitting

on your heels. Then spring quickly up to the tips of your toes again.

If you find it difficult to balance yourself, you may begin this exercise holding on to a chair. After a little practice you will find that you learn to balance much more easily.

Stages on Your Journey

As You Travel on Your Way, there are Milestones You Will Pass, each one bringing you nearer to Your Destination.

Your journey on the road to Motherhood may be divided into two distinct stages.

The first stage is the early months when there is very little alteration in your shape or size, and it is only by the stopping of the periods and by the minor discomforts of morning sickness, pricking breasts, etc., that you know that baby is really on the way. But at the end of this stage—about four-and-a-half months after conception—comes a definite landmark.

I mean, of course, quickening—the moment when you feel within you the first movements of the tiny being who is taking shape and life. In the olden days it was considered rather the correct thing for a mother-to-be to swoon away when she first felt her baby move, and even nowadays you may feel a momentary sensation of faintness. But the feeling soon passes away, and the thrill of that moment of quickening is surely a joyful one.

Checking the Dates

It is at this time that those mothers-to-be who are not, in the ordinary way, very regular with their periods, and who are, therefore, not quite sure when baby's arrival in the world is to be expected, should consult their doctor and get their dates checked and verified.

Exercise 5.

The first movements of your baby feel like the fluttering of a tiny bird, but as time goes on and he grows and strengthens, the movements become much more pronounced.

After this you begin your second stage of your journey. It is, in a way, a more comfortable stage. Morning sickness will no longer trouble you, and many women feel better in health than they did during the earlier months. But in another way it is less pleasant. Baby is growing rapidly now, and making you feel heavy and clumsy. It is more difficult for you to get about, and time is apt to hang heavily on your hands. But thoughts of the future—so near, now—when the eagerly expected little traveller will have actually arrived, should help you to avoid getting depressed.

The Care of the Breasts

One of your chief concerns during this stage of your journey should be the care of the breasts. These will have grown larger and heavier by this time, and the skin round the nipple will have darkened. Often, too, fluid comes from the nipples, so much so that some wives find it necessary to wear pads of soft material to protect their clothes. This is nothing to worry about, but rather the contrary, for it promises a plentiful supply of milk for baby when he comes to require it.

Meanwhile, scrupulous attention must be paid to cleanliness of the nipples. They should be washed at least twice daily with warm water and a good

soap, to make sure that not a particle of dirt, which might harbour germs, remains upon them.

All through pregnancy it is a good plan to make a habit of massaging the nipples with the fingers, when you undress, and pulling them out and gently rolling them round. After massaging, moisten the nipples with olive oil or sterile vaseline. Do not bathe them with eau-de-Cologne, as this tends to harden them, and may cause cracking later on.

On no account wear a tight brassiere which will compress the breasts and hinder the free passage of milk. If you feel the need of support, choose a brassiere which gives uplift without putting any pressure on the nipples themselves.

Stumbling Blocks

Another thing you must be careful about somewhere near the end of the fifth month of pregnancy, is varicose veins. If you see any signs of these, it is wise to get crepe bandages or elastic stockings, and wear them during the day. The varicose veins are due to your increased weight, and are caused by standing. They are not, however, serious, and will disappear after baby is born.

During this stage of your journey you may be troubled by piles. These are caused by the same thing as varicose veins, and they, too, will disappear when baby has been born. But, meanwhile, they can become very painful, and it is advisable to take a dessertspoonful of liquid paraffin every night, and be very sure you do not allow yourself to become constipated. Nut gall ointment may be applied and will be found soothing.

At this stage your appearance has, of course, considerably altered. Do not, on any account, wear a belt that will compress the abdomen. As baby gets heavier you will probably find it comfortable to wear a well-fitting maternity belt or binder, but this must hold up the abdomen without pressing it. If you cannot afford a special maternity belt, a wide crepe bandage will do. This should be put on while you are lying down. Start from below and wind it on upwards. The bandage should be about eleven inches wide.

The Last Few Weeks

Towards the last few weeks of pregnancy a change occurs that is often known as "lightning." This means that the womb sinks lower down in the pelvis, with the result that the pressure on your chest and the upper part of your stomach is greatly lessened. You will feel particularly well in health at this time, and also more active than you have been for some time, and in your heart there will be a little cheerful whisper that your waiting time is nearly over, and soon —soon—you will hold your little one safely in your arms.

One thing that must be avoided during the last two months of your journey is making baby too fat. A big, fat baby means a difficult labour, and is not desirable in any way, since a thin baby is generally healthier than a very fat one. After he is born it will be easy to fatten him up.

During the eighth month you must be very moderate in the amounts of bread, sugar, and potatoes you eat. Milk should not be taken as a beverage, although there is no need to give it up in your tea or coffee. It is not true, though there are many people who still think so, that the amount of milk you drink increases the flow of milk when baby arrives. Fats—such as the fat of

meat, cream or butter, should be taken sparingly.

Another thing to remember, during these last few months, is that a strain is being put on your kidneys, and you should do what you can to lessen this strain. Meat and eggs mean hard work for the kidneys, and should, therefore, be avoided.

Perhaps by this time some of you are wondering whether you are to be allowed anything at all to eat, as your journey nears its end, so I had better reassure you by telling you of the things that you may safely take. Salads, green vegetables, fruit, fish, brown bread, and plenty to drink is the best diet, and from these you will get all the nourishment that is needed, both for you and the baby.

Danger Signals

The usual time for a miscarriage is during the first three months of pregnancy, or at the seventh month, and the most likely moment is that at which the period would normally occur.

Some women are much more prone to miscarriage than others, and if you have once had one, you should take particular care, when you have another promise of a little one that such a thing does not happen again. It is even in some cases advisable to spend three or four days in bed, at the period time. Your doctor will advise you about this.

A loss, however slight, during pregnancy is a warning of a miscarriage, and if anything of the sort occurs, you should go to bed a once and send for the doctor. By staying in bed for a week at least, a threatened miscarriage may often be avoided.

The Cause of the Trouble

The cause of miscarriage may be a shock, a fall, or a fright. These things should, of course, be avoided as far as possible and if they do happen, it is often possible, by exercising control of your nerves, to lessen their effect.

Another cause may be feverish illness. While you are pregnant you should avoid, as far as you can, being with people who are ill, and if there is any sort of epidemic about, don't go to the pictures or to places where there will be a crowd and where you may pick up infection.

A displacement of the womb may cause miscarriage, and if you know that you have this, you should go to a doctor at once and have it put right.

If either you or your husband has a chronic complaint, such as tuberculosis or kidney trouble, this, too, may be the cause of a miscarriage. But the fact that you suffer from one of these

The choosing of garments is a task dear to the heart of every mother.

The garments must be warm without being heavy.

troubles does not necessarily mean that you cannot have a baby. It only means that you will have to be extra careful, and that your doctor must watch you closely, to make sure that everything is going well.

One word of advice—do not allow yourself to dwell upon the danger of a miscarriage, and so upset your nerves. It is very unlikely that you will have one, so long as you take ordinary care and follow the simple rules which I am giving you in this book.

The Seven Months' Baby

A miscarriage after the end of the seventh month is, of course, a very different matter, for in this case baby has a good chance of living. He will want a very great deal of care and attention, or warmth and special feeding, but there is no reason why he should not grow up safely and in time be every bit as strong and healthy as his more fortunate brother who was not hurried into the world.

To begin with, a seven months' child will be very small, and his circulation will be poor, so that he cannot keep himself warm. His cot must always be placed near a fire, even in hot weather, and a screen kept round it to avoid any possible draught.

For some time this baby cannot be bathed or he will catch cold. Instead, he must be rubbed every day with warm olive oil, and only a small part of his skin uncovered at a time. Nor can he be dressed. He will have to spend the first weeks of his life wrapped in cotton wool. The best plan is to make him two long coats of gangee tissue. One of these and a napkin is all that he will require.

He must not be lifted out of his cot when his napkin is changed. If this is found difficult it is enough to put a thick pad under him, which can be taken out and burnt without disturbing him.

An ordinary child does not need to be fed until he is a day or two old, but a premature baby must have his first feed at about six hours. Weak condensed milk is the best thing to give him—drop by drop, with a spoon. He will take an ounce every two hours, and must be fed during the night. As soon as his mother has milk enough,

he should be breast fed. It is possible that he will not be strong enough to suck, in which case he must continue to be fed in drops from a spoon, and a breast pump must be used to draw off his mother's milk.

When the Time Comes

Your Journey is Over; Your Preparations are Complete; a few Hours of Calmness and Courage . . . and your Happiness is within Your Arms.

When at last the end of your journey is reached and the time has come for your confinement, I do hope none of you are going to be panicky about it. I am not going to pretend that you will not suffer pain. You cannot expect to have such a precious thing as a baby without paying for it. But I assure you that the pain you will have to endure will be well within your power to bear. Nowadays we believe that every mother should have an anæsthetic when necessary. We see that she has something that makes her sleep through many hours, and allows her to keep up her strength and not get worn out by pain. You must keep a firm hold upon your nerves, telling yourself that you are quite safe, that the pain will not be too bad, and that soon it will be all over and you will realise how well worth while it has all been.

How You Will Know

The first signs that labour is beginning may be pains. True labour pains always come in the back, not in the front. Or, perhaps, the first sign may be that the water breaks. There will be a sudden, uncontrollable rush, followed by a fit of shivering. Or there may be only a very slight show, as at the beginning of a period.

If this happens, do not get worried or excited. Send for nurse and just rest quietly until she comes. Then leave everything to her. She will take charge, and will say when it is time to send for the doctor.

With a first baby there is always plenty of time. He will probably take at least thirteen hours to come into the world, and perhaps longer. So you see there is no need for panic or hurry.

A cot, with curtains as a protection against possible draughts, is essential.

Rest and wait. If you feel nervous and fussy—and, after all, it is only natural that you should—get someone to talk to you, or to play a game of cards, to get your thoughts off and p..ss the time away. Remember, the calmer you keep, the better for yourself and baby—and for your husband, too, for it is a trying and nerve-wracking time for him, as well as for you.

The Opening of the Door

As time goes on, the labour pains become sharper, and there are shorter intervals between them. I have heard these pains described as being like the slow opening of a door to its widest, and then the slow closing of it, and this is, I think, a very good description. Think of this, when your pains are upon you. A door opening and shutting—opening and shutting—until at last it opens wide enough for a little life to issue forth into the world. Say to yourself, also, "This pain is bad, but it is going to be cured soon—and the cure will be the coming of my own darling baby." With that thought, you will be able to bear it bravely, won't you?

All the time nurse will be beside you. For every suggestion she makes she has a very good reason, so do exactly what she wants you to.

The pains grow sharper and nearer together—sharper still and nearer still. And you, if you are wise, remember to be glad of their intensity, because you know that it means that the time you will have to endure them is getting shorter and shorter, and the moment is coming closer and closer when the most wonderful peace will descend upon you, and in your arms you will hold the most marvellous new being—your own baby.

Don't panic about sending for the doctor. Nurse knows exactly when it will be necessary. Trust her and be as calm and brave as you can. And then, at last, just as you are wondering how long it is going on and whether you really can bear it, the doctor is there, and there is a whiff of chloroform for you, and when you wake up, Baby has come and is waiting for you to take him in your arms.

What You Should Wear

The Best Clothes for Comfort, Health and Beauty During Your Time of Waiting.

Every woman loves to look pretty, and it will have a very bad effect upon your mental outlook, and even possibly on your health, if you let yourself go, during the months before baby is born, and take no trouble with your appearance.

For the first half of the time you will not be tempted to do this, but towards the end of the time the figure becomes clumsy, it is difficult to make your frocks fit, and you feel that it is useless to try. But at this stage, you should make yourself a loose, graceful garment—a sort of rest gown—in a soft, small-patterned material that will hang in nice folds and not grip tightly anywhere.

A Becoming Pattern

A crossover design is best, for it has a slimming effect and can be worn more and more loosely, as required. Also it can easily be taken in and made use of after baby arrives, for it is a very convenient shape when you are feeding him.

Nothing that you wear must fit tightly at this time. It is supremely important that the blood shall be able to circulate freely to all parts of your body, and anything tight is apt to interfere with this. Also any constriction round your middle prevents baby from kicking about, which it is good for him to do. No corsets should be worn, or a tight skirt-band, or even garters, as these tend to increase varicose veins.

During the earlier months it is permissible to wear corsets, if you wish to, and if you find the support of them comfortable.

But although they may fit snugly below the hips, they should be loose enough at the top for you to put both your hands inside. A proper maternity belt is best for you to wear, but if you cannot afford this you can make yourself a very good substitute by inserting a strip of wide elastic at each side of your corset, so that they will stretch easily as you require more room.

Later on, you will discard even this, but if you have been practising your exercises regularly, your muscles will be firm, and you will feel no uncomfortable sagging.

Instead of garters, you must wear suspenders, and these should be attached to a garment which hangs from the shoulders, not the waist.

Baby's Layette

Everything must be perfect for King Baby. All his tiny garments must be the best you can provide for his health and comfort.

The choosing and making of the tiny garments which are to be worn by the little traveller when at last he arrives is a task dear to the heart of every mother-to-be. It is a very important task, too, for a great deal of baby's comfort and even health depend upon his being clothed sensibly. His little garments must be warm without being heavy or bundly; they must be few in number and easy to put on and off, for the process of dressing and undressing becomes wearying to a tiny person if it continues too long; and they must be supremely comfortable, with nothing rough or scratchy to irritate his soft skin.

Here is a list of clothes you ought to provide for baby:

- 4 daygowns.
- 4 petticoats.
- 4 nightgowns.
- 4 vests.
- 24 napkins (Turkish towelling).
- 24 napkins (muslin).
- 4 pilches
- 6 bibs
- 3 knitted matinee coats.
- 3 knitted "panties," with feet.
- 2 shawls.
- 4 knitted belts
- 4 pairs knitted bootees } If baby is to arrive in winter.

How To Make Them

Now as to the best patterns and materials for these garments. It is a very good plan to make them all either wrap-over in shape, or to fasten all down the back, so that nothing needs to be slipped over baby's head. Baby generally greatly dislikes having things pulled over his head, and it is a difficult process for an inexperienced mother.

The handle of the pram must be just the right height for you to push.

The vests should be loosely knitted in baby wool, or in a soft silk and wool mixture. In the summer they should be made sleeveless, but in the winter they should have long sleeves, fitting closely at the wrists. They should be made wrap-over, to tie at the back.

For the little petticoats, flannel should be used. Choose a flannel that is not too thick and also not too closely woven, so that it will be absorbent. Make the petticoats fairly full in the skirt part, so that baby's legs are free to kick. And make it to tie all down the back with narrow tapes.

The daygowns may be of lawn or of washing silk or of any material that will stand constant washing. These, too, may fasten with tapes at the back. And for the nightgowns, a good quality flannel of medium thickness can be used, or a woollen material such as nunsveiling.

Nowadays none of these clothes are made really long. About twenty-four inches is long enough for the day clothes, with a few inches extra for the nightgowns, so that his little feet can be cosily tucked up in them. Later on, when you come to "shorten" him, you will find the things need very little alteration, and to allow for his increase in width, as well as length, it is well to make all the little gowns with tiny tucks on the shoulders and plenty of room in the sleeves and cuffs.

Straight shapes are the most practical, made in one piece, with no waistbands.

The Extras

In addition to the necessary things I have listed, there are many little extras which are useful to possess. For instance, for a winter baby one or two pairs of little woolly gloves are wanted. These have all the fingers together, with a separate thumb. Later on, when baby sits up in his pram, it is a good plan to attach his gloves to his coat, with a length of narrow ribbon, so that if he pulls them off they will not get lost.

Then he will need some little caps or bonnets, to match his matinee jackets. The ribbons of these should be crossed under his chin and tied at the back of his neck, so that the bows are out of his way.

With a small piece of flannel left over from his clothes, you can make a cover for his hot-water bottle—a very necessary precaution for a cold weather baby.

Make everything as plainly and as simply as possible. Frills and unnecessary ribbons and complicated embroideries and stitchings are completely out of date. Perhaps it is true that we are not as proficient with our needles as our grandmothers used to be, but I really think that in some ways we have a greater amount of commonsense in our fashions—at any rate, for tiny people.

A cot, with curtains as a protection against possible draughts, is essential.

A comfortable pram is important for baby, since he will spend a good deal of his time in it, getting fresh air and sunshine. Be sure that the pram you choose is not too deep, or he will be lying in a dark and airless hollow.

The handle of the pram must be just the right height for you to push. It will soon give you a backache if you are obliged to stoop at all.

Push the pram about before deciding upon it, and see that it runs straight ahead and does not turn to right or left.

The Care of the Child

NOW baby is really here—after all these months of waiting you have your own dear little son in your arms! How happy you must be, and how happy and proud is Daddy, to whom the new name comes as a wonderful, never-before-experienced thrill. You both look at him as he lies in your arms, and as you see this tiny, helpless little mite, perhaps you are filled with a sudden fear that you may not be able to do all that you should for him.

All the work you have had during the past months to bring this healthy, wee laddie into the world is not over—in fact, it is just beginning. But it is a different kind of work—and what a great deal of enjoyment you are going to get out of it. Isn't it going to be fun? Of course it is. But not only fun, little mother. It is up to you and Daddy to make a good man of your baby. If you rear a healthy, good citizen, then you will have done one of the best things that you can possibly do for your country. Until he begins to go to school, all his little life will be yours to guide and control. Your influence will be the biggest thing in the world.

Therefore, what kind of a man he turns out to be depends on what kind of a training you are going to give him during his first few years of life. It is a very serious thought, isn't it? You can teach him to be self-controlled, self-reliant, and obedient. If you make him into a selfish child, then you will have taught him to be a selfish man.

The successful training of a child begins even with this tiny mite, newly born and lying so helpless in your arms. If you don't begin in the right way now, you will have many mistakes to undo later on, many a rod that you have made for your own back.

You will hear some people say that children are a nuisance—but there is never any need for a child to be a nuisance; if he is, it is the mother's fault, and not his. A well-trained child gives no trouble, and his training starts *now*, little mother.

In this article I am going through every stage of baby's development, step by step, so that you will know how to do all the things that are necessary to keep him healthy and strong, and at the same time well-trained and well-behaved.

The bath should stand on a low table.

Baby's First Bath After Nurse Has Left You

When nurse has left you, and the first day you begin to get things ready for baby's bath, I daresay you will feel a little nervous about it. Nurse will have shown you just what to do, and you will probably have done it once already under her kindly eye. But then she was there, ready to help if you went wrong, or to run and fetch things if you had forgotten to get all you needed. Now you are really on your own, and you must not make any mistakes.

Really, it is quite easy, and nothing to get flustered about. Start by putting everything ready that you can think of, and then go over all the stages of bathing and dressing in your mind and see that nothing has been forgotten.

Baby must not be in a draught, so shut the window. Unless the weather is really hot, you will need a fire for him. If there is any chance of a draught from door or window, then you should have a screen round the bath and your chair. If there is not such a thing in the house, you can easily make a temporary one from a clothes horse and a sheet.

Then see that all his little garments are hanging, well aired, where you can reach them from your seat. Put them ready in the order in which they are to be put on, and have the nappie ready folded. See that powder, boracic lotion, and cotton wool are there.

Now get the bath out. I do hope you have bought one of those light papier-maché ones. They are not a bit heavy, and you will not find lifting them a strain. It should have its own stand to raise it from the ground, or should stand on a low table. In this way you will save a backache. It can be very tiring to stoop over a low bath on the ground, and baby can be as slippery as an eel. The temperature of the water should be 100°. If you haven't a bath thermometer, then roll up your sleeve and put an arm in. The water should feel just comfortably warm and no more, above the elbow. Remember your hand is probably hardened to hot water, and it is by the delicate skin of the upper arm that you must test it.

When filling a bath, it is wise to put in the cold water first and then to add the hot. In this way there is no

fear of scalding baby if you should be called off and forget that you have not finished filling the bath, or a bigger child will not harm, if he should fall in. Then soap, sponge, facecloth, two towels and his little chamber for holding him out, a low chair, and we are ready to start. You should wear an apron or towel to protect your dress.

How to Begin

Now take up baby, and undress him as quickly as you can. Put him lying on your knee and cover him with a towel. Wash the eyes and nose very gently with a little wool dipped in the boracic lotion, using a fresh bit of wool for each eye and nostril. Never wash inside the mouth. A baby's mouth is very delicate inside and if you try to wash it, you will most likely injure the lining, and so may set up inflammation.

Sponge his face gently with the soft facecloth. Then well soap your hand and rub it all over baby. Now comes the most difficult part, unless you are used to bathing babies. Pass your left arm under him and hold him firmly with the left hand under his shoulder. Take hold of his feet with the right hand and gently lower him into the bath.

With the right hand sponge off all soap. Let him have a little kick if he likes; lift him out on to the towel, and gently dry well by dabbing him with the second towel. Be careful to dry well in all the creases and between the legs. Powder a little under his arms, in the folds of the neck and groins, and under the knees. Turn him over on to his tummy and dry his back, then slip the damp towel away. Powder his buttocks, and now he is ready for his clothes.

While he is still lying face downwards, pull his binder up over his feet, and slip his vest over his head, then his petticoat and dress. Put the folded napkin on and turn him over. A baby should only need turning once, but until you get used to him, you may find that you need two turns. It is all a matter of practice.

Now fasten his clothes, except the nappie. Pick up the chamber, hold it firmly between your knees, and support him on it. He will soon learn from the feel of the cold chamber what it is for. Then fasten the napkin in place, and baby is ready for his feed.

Training When Tiny

A new-born baby should spend all his time in sleeping, except when he is being washed and fed. Sleep is the most important thing in his life at present. During sleep he digests his

Lift him out on to the towel and gently dry him.

food, rests his stomach, and grows. Nothing will ever make up to him for loss of sleep now. So you must train him to sleep well.

His cot should have a firm mattress, so that his little weak muscles will not sag into unsuitable positions; his pillow should be small, and the covering should be warm and light. As soon as baby has finished his feed, see that he is dry, and warm, pop him into his cot, cover him lightly, and leave him alone. He will soon learn what this means.

If you started to play with him after the feeding time, then he would soon expect to be fussed over after each feed. That would mean missing precious sleeping time, and besides, how are you going to manage to get the work done if you have to spend extra time with a baby who refuses to sleep? No, little mother, start baby off with good habits, and you will never regret it.

He should sleep right through the night.

Baby should always sleep with the window open. His little body needs all the fresh air that it can get if he is to grow up healthy. The cot should be out of the way of possible draughts, with a screen, if necessary. You should never find it necessary to close the window during the night-time. In the daytime he will, of course, sleep out of doors. Put his pram out in the garden. If you have no garden then give all the fresh air you can by opening wide a window and putting his cot or pram by this. It will not do him any harm to be out of doors in wet weather. Cover the pram with the macintosh cover, raise the hood a little, and turn the pram back to the rain. The only reason for keeping a healthy baby indoors should be an east wind or fog.

Baby should sleep all night. He should not be fed at night, and if he wakes up, just turn him over and he will soon drop off again. If you start expecting him to sleep through the night from the very beginning of his life, he will do so. Never take him up because he wakes and cries a little. If you do it one night, he will expect you to do it the next night, and then always, and neither he nor you and Daddy will ever get a full night's rest.

It is very, very important to train baby now, before he has begun to get into bad habits Don't pick him up and play with him because you want to show him off. He will like this, and next day when he awakes, he will cry to be taken up. Then he will begin refusing to lie quietly, just cooing to himself, in his cot when he is awake. He will cry and scream until he gets

exhausted or until you give in, just for this once. But it won't be this once, it will be for always, little mother. So now train baby to lie in his pram when he should, to be fed by the clock and at no other time, to get used to using his little chamber at the same time daily, and to sleeping all through the night.

How Often Must He Be Fed?

It is very important that you should get sufficient rest after baby has come. No mother should get up before the end of the tenth day. There are many reasons for this. Your body has had a hard piece of work to do, and it needs time to rest quietly before it can get back to its normal condition. The womb has been stretched very much to be big enough to hold baby, and it will take ten days at least before it returns to the usual size. The discharge should have stopped before you get up, and this will take ten days. Then you are of course, going to feed baby yourself, aren't you? If you get up too soon, you may lose your milk. This would be a sad calamity. So don't be too anxious to be downstairs again.

Sometimes, after a long labour, the womb takes longer than usual to return to the normal size, or the discharge does not clear up. In this case you must be content to stay in bed as long as the doctor wishes. It may seem a waste of time to you, especially if you feel well. But you would not be in a hurry if you could look ahead for some years, and see the ill-health that comes from getting up too soon after a confinement.

You may be one of the lucky ones who can be well without taking the proper amount of care of your body. But again you might not. And then, later on in life, you might have a prolapse of the womb, and have to wear

Make up the feed according to the directions on the tin.

a ring, or even to have an operation for this condition, when you might have avoided this by staying in bed a few extra days when baby came. So always follow doctor's advice, and never, in any case, get up before the tenth day.

While nurse is with you, she will start the early training of baby. This training will begin from the very first day of his life. When you look at the tiny new thing, lying asleep in his cot, you may smile at such an idea. How is it possible to start training anyone so young and helpless, who cannot talk or understand anything that is said to him? But a baby is like a little animal. His body knows when it is too hot or too cold, when it is wet and uncomfortable, and when it is hungry. And it is through his feelings that you can

train baby. And this early training is the most important thing in his life. You have a perfectly clean, new sheet, and on it you can write just what you like. There are no bad habits to be broken before you can start.

So before nurse leaves you, get her to tell you just what she has done for baby, just how she has done it, watch her when she baths and changes him, and then make up your mind that you will do your best to continue to keep him in his good ways. And you will find that if you have a well-trained baby, and if you do everything for him by the clock, that you will have a very much easier time than if you did things when you thought you would. I have told you about his sleeping. Now I will tell about his feeding.

Feed by the Clock

A new-born baby should, as a rule, be fed every three hours. I say as a rule. Some babies are fed four-hourly from the start. But in these talks I am giving the average rules, and, of course, they will have to be adapted to some babies. But unless a baby weighs ten pounds it will be fed three-hourly. The feeds must always be given strictly up to time. Never begin ten minutes before you should, because baby is awake and crying. A good cry helps to expand his little lungs, and if he finds that he can get his food early by yelling for it, then you will not have much peace. And never allow the feed to be late. It may only be a few minutes, but a baby has a very delicate digestion, that is easily upset. So feed by the clock. Unless a baby is very delicate or is a premature baby, he should never be fed during the night. The last feed should be about ten o'clock, and he should not have anything more until his six o'clock feed next day. In this way baby's little tummy gets a rest, he learns to sleep well, and mother and daddy get a good night's rest.

Artificial Feeding

Sometimes it becomes necessary to give artificial feeds to baby, before the time that he should be weaned. Then in this case you must be careful to choose a good dried milk. You may want to try him on cow's milk. If you can, be quite sure of the milk, and you have a good airy place where you can keep it, then cow's milk is satisfactory. But if you have not a cool place in which you can keep it, then a dried milk is better.

It is never safe to give a baby milk which may be even a little doubtful. It will upset him, and may perhaps start a serious illness. You must think very carefully about this when starting bottle feeds.

You will have to find out by experience how much to give baby. A safe average is to give one ounce of feed for every month of his age and add one ounce extra. So a baby two months old would be taking a three-ounce feed every three hours. Make up the feed according to the directions on the tin. If a measure is provided, use it. Remember that an ordinary household teaspoon often holds much more than a measured teaspoon, and a few pence spent on buying a measure will often save several shillings in the long run.

If you have to try artificial feeding because you have not enough milk for baby, don't give up the breast feeding entirely. This would be a pity as long as you have a fair amount. In this case you should give him a bottle feed immediately he has finished the breast feed. If you have not much, he may need about an ounce after each feed. If you have almost enough, then give

him the extra after the feed at nine in the morning, and the last one at night.

When you are feeding baby with a bottle, you must take great care to see that everything connected with the bottles is scrupulously clean. The best way is to have two bottles and three or four teats. These should be well washed out after use, and boiled once a day. Use a different teat for each feed. When they are not in use, keep them in a big basin of cold boiled water to which has been added a pinch of boracic powder. This should be changed daily, when you boil the bottles. Cover with a clean cloth and you will find that they are always sweet.

A baby that is being artificially fed, or a child that is being weaned, should always be given a little cod-liver oil daily. In the case of a child of about two months old, half a small teaspoonful twice a day is sufficient.

Always, when feeding baby, whether he is breast fed or not, stop halfway through the feed, and lift him up over your shoulder. Pat his back so that he brings up any wind he may have got in his tummy. Do this again at the end of the feed. Then he can go comfortably to rest.

Care of the Breasts When Feeding

While you were waiting for baby, you were preparing your breasts to be ready for the work they would have to do when baby came, and ready for his food. But all the time that you are feeding him you will have to look after them, if you are to be able to continue feeding. This care will only take a few minutes each day.

Before giving a feed, wash the breasts carefully with warm water, and dry well. Do this again as soon as you have laid baby down. You should always keep them covered with a bit of clean linen that can often be washed, so that they do not touch your clothes. If the nipples should feel very tender, rub them gently after feeding with a little warm olive oil.

Sometimes there is too much milk, and it runs away, and the breasts become heavy and uncomfortable. In this case, wear a thick pad of cotton wool to protect your clothing. You will be much more comfortable if you will get a wide bandage of flannel and pass this under one breast and over the opposite shoulder.

If you have to try artificial feeding, give him a bottle feed immediately he has finished the breast feed.

Before feeding, drink a tumblerful of water half-an-hour beforehand; this increases the milk. If still there does not seem sufficient, then try bathing the breasts with hot and cold water

alternately and gently massaging them.

Feeding time should be a rest for you. Lie down on the bed while giving it. You should arrange the pillows so that you are supported comfortably, lean a little to the side you are going to feed from, hold baby in the crook of your arm with his head a little raised, and you will find that each feed-time you get fifteen to twenty minutes' rest. I know that very often a busy mother finds it very difficult to get all the rest she should do, so that this time is really very valuable to her. But you must do your best to rest your mind as well as your body when feeding.

If Things Go Wrong

Unfortunately, breast feeding is not always as straightforward as it ought to be. Things do go wrong sometimes. A cracked nipple is one of the commonest things to appear. This can be very painful. If it should happen, apply Friar's balsam, and wash with soap and water before feeding. You will have to get a nipple shield and use this for the feeds. Baby may object to this at first. If he does, see that the hole is large enough for him to get the milk, squeeze a little milk into it, and you should not have any more objections. The crack will heal up in a few days' time.

These cracks start just from mismanagement as a rule. Before there is milk for baby, he will be put to the breast and encouraged to suck, because this stimulates the secretion of the milk. But the first day or two he should try to feed six-hourly, and then only for five minutes at a time. Also he should never be allowed to go to sleep while at the breast, or he will make the nipples sodden, and so sore. Disregard of these simple rules will result in a cracked nipple.

Another ailment of breast feeding may be a flushed breast. In this case there is no crack, but the breast will be reddened. If this should happen, apply hot fomentations every three or four hours, and it should be right again in a day or so. But a flushed breast may not get right, but may continue into a breast abscess. The breast will appear red, it will feel hot and painful. Take baby off the affected side at once, and put on hot fomentations every three hours. This may stop it getting worse.

But if there should be any swelling, or the pain becomes throbbing in character, then send for doctor. The abscess will have to be opened before it will heal. When it is quite healed and all is well again, then baby can once more be fed from that side.

Another thing that sometimes happens is a touch of eczema. If it is simply a dry eczema, then powder well with antiseptic powder after washing, and see that the places are kept clean. If it should be a wet or running eczema, then apply Lassar's paste until it has dried up. It usually appears under the breasts, where they touch the skin. It is wise to keep a clean bit of linen under the breasts, then eczema should not appear.

A nursing mother should not need any special diet. Eat plenty of fresh fruit and green salads, drink plenty of water, and otherwise have an ordinary good mixed diet, when you should keep in good health and baby should have sufficient milk. It is quite unnecessary to take stout or alcohol of any kind. This will not increase the milk at all.

The water should be boiled and cooled and given out of a bottle.

You must take care not to allow yourself to get constipated. If you should need anything, never take salts as this helps to dry up the milk. Try liquid paraffin, milk of magnesia, or senna tea. None of these will harm either baby or the milk. The senna tea should be made with cold water and the pods soaked for twelve hours. Then they will not cause griping. An average dose is seven or eight pods, but you may find you need more or less. You can safely take up to twenty pods.

Baby's Progress Step by Step

Here is a list of some of the chief events in baby's life. But don't worry if your baby seems quite well and healthy but doesn't seem as forward as you think his little brother was at his age, or as Mrs. Nextdoor's baby is. You must remember that each child develops at its own pace, and that while general rules for growth can be laid down, every child is just a little different from the next one, even if the next one is another child in the same family.

Don't try to hurry baby. If it is time that he was starting to walk, and he has never tried to stand, don't prop him up and make him stagger along. You will only harm a developing child if you try to bring it on too quickly. It will, unless ill or mentally deficient, catch up later on.

A newly-born baby can see, but his eyes cannot focus, and he will not try to look about. When he is about a fortnight old, watch his eyes. They will turn round as you move about, and soon he will begin to turn his head to look at you. At about four weeks old he knows the difference between your familiar hand and that of a stranger But he does not know it by sight, but by feel.

At three months old he begins to lift up his head and to hold it up without help. Up to now it has wobbled about if you have withdrawn your hand. At four months old he will do his best to catch hold of a bright coloured toy if it is held out for him. And when he is doing this you will probably notice that he is beginning to squint dreadfully There is no need to get worried or to rush baby off to doctor. His eyes are beginning to learn to work together and to focus things as they should do. When they have learnt this lesson the squint will stop.

About the seventh month, hold him on your knee and feel how strong his back muscles are. If you prop him up in a sitting position, he will stay there for quite a few seconds. Every day he does this better and better, until he is pulling himself into a sitting position without help, and staying there.

When to Get a Play-pen

At ten months he is starting to crawl about. He is very funny to watch as he makes his first efforts. He may start off by rolling on to his tummy, and with wild, swimming movements,

propel himself along. Or he may bounce up and down in a sitting position. Then he gets to progressing on his hands and knees.

When baby starts to crawl, he can suddenly begin to be a worry to you. A healthy lively baby will get about very quickly, and you may think you have left him safely in a corner of the room, playing quietly with a toy, and then, looking for him, he is not there. And how often he has been discovered in some most unsuitable place, such as the coalbox! What a mess he can make of himself in a few minutes—his little dress, all grubby, and his face and

At four months he will try to catch hold of a bright-coloured toy.

hands looking as if they had not seen soap and water for days. What a healthy little pickle he is, isn't he? But how are you to manage to keep him safe while you get on with your work, and at the same time let him crawl about and exercise his little limbs as he should do?

What about a play-pen? These pens can now be bought quite inexpensively, or you can have one made cheaply. If daddy is clever at home carpentering, he can easily knock one up for you. They do not take up much room when they are not in use, as they will fold up flat. Put a rug on the floor inside it, and you will know that baby will play safely while you are busy, and that you do not need to keep stopping to find out where he is.

When he first starts to toddle he will fall down. All babies do this. They seldom hurt themselves. It is really amazing what a lot of tumbles a baby can have without injuring itself. Have you seen those chairs called Little Buffers? They are low chairs, with a tray in front, and the legs have wheels. Put Baby in this. He cannot fall out, the chair cannot overturn, and by kicking against the floor he can get around. This exercises his legs. He can have his meals and his toys on the tray. When this little chair is not wanted, it can be folded up and put on one side. You would find it a great help to you.

How often have you taken baby upstairs while you made the beds, and then, having taken your eyes off him for a few minutes, heard the bump, bump that means he has fallen downstairs? Why not fix a small gate at the top of the stairs? Any baby will soon learn how to get upstairs, but they usually come down head first until they really learn how to manage the steps. A gate will save many troubles.

Another thing that will be a help when baby walks is a pair of reins. They are quite cheap. The best ones have a kind of harness that goes round baby's body, and mother holds the reins. Then if baby slips you can save him, and you can guide his steps. It is not always safe to hold a little one by the hand before he can walk well. If he slips, you instinctively lift your arm to save him, and this sometimes means a wrenched elbow or shoulder. If this is not noticed and put right at once, the arm may not grow properly, and will be shorter than the other one. Never pull a baby's arm.

You can easily knit reins if you like.

Use gaily coloured wool, and stitch bells on the front of the harness. But always remember never to leave them where baby can get them if you are not there. Even the most firmly stitched-on bells can be pulled off, given time and perseverance, and into baby's mouth they go!

When and How to Wean Him

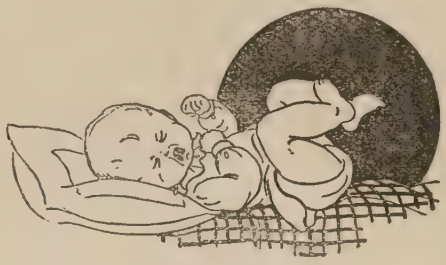
Unless in case of illness or some dire necessity, baby should always be weaned gradually. A fortnight at least should be taken over it, and he should be breast fed until he is eight or nine months old.

When he is about six months old, you can begin making small additions to his diet. In this way he will be getting used to other articles of diet and then you will not have much trouble when you wean him altogether. He will, of course, when he is six months old, be having a drink of water at least once during the day. This should be boiled and cooled, and given out of a bottle.

He will also be having orange juice daily. This can be started when he is two months old. Begin by giving a teaspoonful daily, with a little sugar added. It can be gradually increased until he is having the juice of half an orange at a time. The next thing will be to let him suck a hard crust. This should be held, so that he does not suck off a bit, swallow it, and choke. A hard crust is useful for helping him to cut his teeth. In a short time you can put butter on it.

When he is eight months old, collect the red gravy from the joint and give him after that one feed. By this time baby is beginning to need more and more kinds of food if he is to grow up strong and healthy. You will probably find it easiest to continue with the breast feed at six in the morning and last thing at night until the end.

Begin now to give strained broths and soups for the midday feed, followed by a little stewed apple pulp and with a drink of warm milk. When he is quite used to this, give him groats for his breakfast. By the time he is a year old, he should be having one to one and a half pints of milk daily, either plain or made into custards, etc.; two to four lightly boiled or poached eggs weekly; broth three times a week; small amounts of potato, spinach, cauliflower, and finely-chopped cabbage; steamed or boiled fish; minced



You can learn quite a lot from his cries.

meat, and fresh and stewed fruit, with bread and butter or rusks.

The breast feed at night will be the last one to be stopped, and he should not have this after ten months of age. If you can manage to find time, I think it would be well worth your while to try and teach baby to take his drinks from a mug as soon as you start weaning him. This will be rather slow and messy at first, but then you will have to train him to take first a bottle and then, later on, a mug. Now is the time when even a breast-fed baby should have a teaspoonful of cod-liver oil twice a day. He should continue with this until he has cut all his first teeth.

If Sonnie Won't Take Milk

It is often difficult to get a child to take sufficient milk. Sometimes they do not like it very much, and mother is at her wits' end as to how to get it down. Food taken unwillingly does not do so much good as when it is taken eagerly. Here is one way of getting down a cupful without fuss. Add a drop of cochineal to the milk and shake it up. The milk will turn a pretty pink colour, and the little one will often drink up the pretty pink fluid when he will turn away from the "nasty old milk."

Another way is to buy a packet of lemonade straws, and to let him suck up the milk through one of these. This often turns milk-time into a game. One child I knew would always take milk, as long as he could have it out of a small teapot. Children are strange little beings, and if you will spend a little time thinking out new ways of doing the same old things, you will often save tears and trouble.

What Does Crying Mean?

Listen to baby crying—you can learn quite a lot from his cries. It is nearly feeding time, and he is hungry. That cry is quite different from the one he gives when he is in a temper, isn't it? Learn to know the hunger cry from the yell of pure rage. Then there is the cry of discomfort. He is wet or cramped and wants attention. That cry is different, too.

Then there is the cry of pain. Perhaps he has taken his feed too quickly and has wind. The cry is a sharp one, and his little legs are drawn up on his tummy. As the spasm stops, so does the cry, and his legs are relaxed, only to start all over again when he gets another attack of pain.

Then there is the thin, tired little wail of the very ill baby. He sounds as if he had no strength at all to spare in crying; it is only a whimper. Learn to distinguish between his cries, little mother, and you will know when to be stern with him, and when to send for the doctor.

The first three kinds of cry you can deal with. The pain cry is different. See if you can remedy it before getting doctor. Hold baby up over your shoulder, and pat his back, trying to get up the wind. If this does not succeed, turn him face downwards on your lap. This may help him. Rub his tummy round and round starting from the lower right-hand side, and put warm flannel on. A dose of gripe water may cure him.

But if none of these things are of use, then I think the safest thing would be to let doctor have a look at him. He may need an aperient, but it would not be wise for you to give this, because the cause of the pain may be an intussusception. This is a kind of stoppage of the bowels that sometimes occurs in babies. An immediate operation is necessary to cure it, and an aperient would make it very much worse. So don't give aperients when baby has a pain unless you get advice from doctor.

But don't be afraid that baby is really ill when he cries—it is very unusual, and it is not at all difficult to tell. A good cry will do him good, when nothing is wrong, as it expands his lungs.

The First Little Teeth

When baby is born, his tiny teeth are already in his gums, waiting to come through. Now, if you have taken proper care of your health all the

time that baby was coming, and have been sensible over your diet, then these little teeth of baby's will come through looking like tiny white pearls. They will be healthy teeth.

You must take care of them until they fall out, to make room for the second set. You will see that the little man has a good diet, and that he gets plenty of fresh air and sunshine, and so his second set will be good, healthy, strong teeth, that will last him for the rest of his life.

But if any of these things have been neglected, then no teeth will appear when the right time comes. The teeth will be cut in the wrong order, and they will soon decay. This is one of the signs of rickets. But your little one is not like that, is he? He has had a good start in life and he is going to keep it.

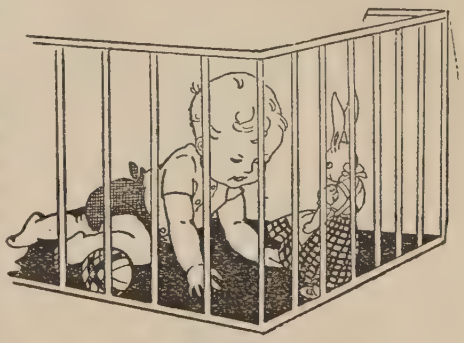
Now when baby is six months old, he will start cutting the teeth. Some babies cut their teeth without any trouble at all, and others seem to make a great fuss over it. The first teeth that appear are the two middle ones in the lower jaw. Then come the two similar ones in the top jaw. Next are two at the sides of those already cut in the upper jaw, and then the two lower ones. When baby is a year old, he should have eight teeth through. On his second birthday he should have twenty teeth, and this is all he will cut until the second set appears, when he is about six years old.

When baby begins teething, he will probably begin to dribble very much. This often starts about the fourth month, and is one of the first signs that the teeth are appearing. This constant dribbling can make the chin very sore. It should be frequently washed and kept as dry as possible. A little ointment, made up of vaseline and salicyl acid, will cure a sore chin.

When the teeth are coming through, baby may be fretty. He may turn his head restlessly about on the pillow. If he does this, try rubbing the gums gently with glycerine. It will ease them. If they seem very hot and swollen, take baby to see doctor. You will find that frequent drinks of cool water will be eagerly taken.

Teething Troubles

Do not worry if baby goes off his feed or stops gaining weight for a few days. He will be right again as soon as the teeth are through. He may be sleepless and cry a great deal. This again is only a passing thing, and need not trouble you unduly.



Play pens are now quite inexpensive.

Sometimes a baby will get eczema. If this appears, it will very likely not clear up properly until all the first set of teeth are through. It is a troublesome complaint. You must prevent baby rubbing or scratching the sore places, or he will get into a terrible state. Splints made of cardboard should be bandaged on to the inside of his arms, so that he cannot bend his

elbows. All the scabs should be carefully removed by soaking with warm olive oil.

His bowels should be kept well open. Give him liquid paraffin and milk of magnesia if there is the slightest difficulty. Do not use any soap and water to clean the sore places, only the olive oil.

When baby begins to cut his teeth, he will be old enough to suck a crust. The best thing to give him to play with now is a big bone ring. He can bite on this and it will help the teeth through. Do not give him a dummy. They are not good things for a baby to have, little mother. They are dirty. They may be dropped on the floor, picked up and put into baby's mouth, with all the dust and germs on them. Baby may push it down the cot, it gets wet, and when he wakes up and finds it, into his mouth it goes. Also, the constant sucking alters the shape of the mouth, and the little jaws grow the wrong shape, so that there is not the right amount of room for the teeth. Then we see those mouths with teeth that stick out and look so ugly.

I know that sometimes a baby is weakly and cries a lot, and then it annoys the neighbours, so that a mother, in sheer desperation, buys a dummy and pops it in baby's mouth. Well, this is not good, but if you have to do it, then please see that the dummy is as clean as you can keep it. If it falls on the floor, wash it before giving it to baby. Always boil it once a day, at least. Never put it in your own mouth and then in baby's. Never let him lie asleep with it in his mouth. And break him off it as soon as you possibly can do so.

Let him be in the sunshine as much as you can.

Fresh Air and Sunshine

Baby needs all the fresh air and sunshine that he can get. He can never have too much. If he has not sufficient of these, even if he has everything else that he should have, he will get rickets. None of you want that to happen, do you?

Mild rickets may only mean that baby does not get his teeth through at the proper times, or that he is a little late in walking and talking. But it may mean that he gets bow legs, that he has a big, flattish head; his chest may be pushed out and have little knobs all round the ribs, or what is known as the rickety rosary. He may not learn to walk until he is two or three years old, and will be altogether a miserable little specimen. Fortunately, we do not see many babies like this nowadays. We have found out that sunshine and fresh air will prevent rickets.

Now, your babies are going to be properly brought up. The bedroom window will be open all night, and he will sleep in his pram in the garden or by an open window, all day. But will you all look at him as he lies in the pram and see if he is getting enough fresh air? If the pram is a deep one, he will be breathing in the stale, used-up air, because the fresh air cannot reach him. So if you have bought a deep pram, will you put a cushion or a second mattress in it, and so raise him

up that his face is only a few inches below the edge of the pram? Then he will get the air.

The hood of the pram should be used to protect him when it rains, but never have it up more than you need. It is far better to put it half-way up, and turn the pram with its back to the rain.

Let him be in the sunshine as much as you can. Do not let the sun shine directly on his eyes, but turn the pram round with the sun. The shade from a tree or a wall is better than raising the hood.

Sunbaths are good for babies, if you take care when giving them. When starting them, choose a warm day. Undress baby, and lay him to kick on a rug in the sun for five minutes. This is quite long enough to start with. When you are putting baby out in the sun, always remember that his skin is very delicate and beautiful. Never give him a heat bath. This means that you must always shield him from the sun in the hottest part of the day, and not put him in direct rays. This would be harmful to him. His temperature would go up, he might be sick, and he might very easily get sunstroke. Also, his skin would probably come out in blisters. So take care to give a sunbath in the warm morning hours.

A little child's head should always be protected. Children get heat and sunstroke much more easily than people realise. A light linen hat, with a broad brim, or a sun-bonnet with a frill to protect the neck, should be put on whenever baby goes out of doors in the hot weather.

When baby is in his pram or his cot, he may be a little fretful. There is the cry of discomfort, but you cannot find anything wrong. Have you ever thought that the poor little mite is doing his best to tell you that he is too hot? Slip your hand against his bare body. If he feels the slightest bit damp, then he is too hot. Never overclothe a baby. In the hot weather a nappie is sufficient or that and a vest.

If you train baby to be used to fresh air and outdoors, and not to be over-

When he is six months old he will start cutting his teeth.

clothed from the start, you will find that he will grow strong and bonny, and will never need to be indoors, unless the wind is east or there is a fog. An outdoor baby seldom catches a cold, unless he is taken into a stuffy atmosphere. He can resist disease, and if he does not get ill, he stands a much better chance than the baby who is always kept indoors. So as much fresh air and as little clothing as possible, little mothers.

If you have started wrong and, through over anxiety for his welfare, have kept baby overclothed or in too stuffy an atmosphere, it is not too late to change—but change very gradually, or he will get cold. Every day get him a little more used to fresh air.

Early to Bed!

Baby should be in bed by six o'clock every night until he is six years old. Every growing child needs an enormous amount of sleep if his body is to develop properly and his brain is to keep pace with it. So don't keep a little child up late at night. It is not good for him in any way. He should sleep right through the night. If he wakes early, give his feed, if he is still having the six o'clock one in the morning. If he is not, then take no notice of him. He must learn to lie quietly in his cot, playing with his fingers or cooing to himself, until it is time to get up. Don't make a habit of taking him into your bed.

A baby should not always be played with and rocked about. This is bad for him. But even a tiny child needs some playtime and some mothering and cuddling. This time should always be bedtime. If he is bathed in the morning, he will only need his hands and face and tail sponging over at night, and now is the time for a kick on mother's knee. As he grows older, this time can be extended, but never allow him to be played with or to romp about until he has tired himself out when he is very young. If he gets overexcited before bedtime, he will probably take a long time to drop off to sleep and may be restless or even wake up with nightmare.

The little two-year-old will be having his bath in the big bath now. Let him splash about for a time, of course seeing that he does not stay in long enough to get cold. Now is the right time to start teaching him how to keep his body clean. Let him hold the sponge, and soap the flannel and wash his face for a start. Then gradually let him do a little more, until you feel that if one day you were kept from helping him, you could trust him to have his bath properly if someone filled it for him.

How Much Should He Weigh?

The weight of a full time baby varies very much. He may weigh as little as six pounds when he is born, or he may be as heavy as ten pounds or even a little more. The average weight is about seven pounds.

During the first week of his life he will lose a little, perhaps up to half a pound. Then he should start to put on weight, and should do this each week. At first the gain may be only an ounce or two, but when he has got used to this strange world and has settled down to regular full feeds, he should gain six ounces a week regularly.

While nurse is with you she will see to the weighing, but after she has left you, the easiest way will be for you to take him to the welfare or the chemist's shop once a week and have him weighed. But if this is not possible, then the ordinary kitchen scales will do.

Make sure that you weigh him at the same time every week. If he is weighed at home or the welfare, he can be undressed, but if he is weighed at a shop, then make sure that his clothing is the same every time. A most alarming loss or gain can often be accounted for by the fact that mother forgot that last week he was in a thin summer frock or that he has just gone into his winter woollies. Also, if one week he was weighed before a feed and the next time just after one, this would make a big difference. So find out just which time is going to suit you and baby best, and then stick to that as far as you can.

His weight may be stationary while he is struggling to cut a tooth. Don't worry about this for a week or two if he seems well in other ways; he will pick up when he feels better. But a continuous loss of weight or one that does not lose but does not go up, indicates that something is wrong, and baby should see a doctor, if you cannot find out yourself what is the matter.

If you have to give baby supplementary feeds and want to know just how much baby should have each time, weigh him before you give him the breast and again immedately afterwards. He should gain the weight of his feed. Now if baby is three months old, he should be getting always four ounces at a feed; that is, one ounce for each month of his age and one ounce over. So if you weigh him before his feed and then afterwards, and find that he has only gained two ounces, then he needs a supplementary feed of two ounces, to make up the four ounces. The ordinary kitchen scales will be quite accurate enough for this simple test feeding.

Baby should be weighed weekly until his first set of teeth are through. After then, if he is healthy, once a month will be enough, just to see that he is going on as he should do. He will not, of course, continue to gain at the same rate. By the end of the fourth month, an infant should have almost doubled his birth weight; and by the end of the first year it will be about three times the original weight. So if baby weighs seven pounds when he is born, he will weigh about fourteen when he is five months or so, and by the end of his first year he will be twenty-one pounds. This, of course, is just a rough guide for an average baby. If he should be very small or a premature baby, or have some illness, then you cannot expect him to be up to normal weight, can you? You will be able to judge for yourself.

He can have his meals on the tray.

During the second year the child should gain five to six pounds in the whole year, and about four and a half during his third year.

If Baby Gets a Cold

I have often been asked if baby should go out while he has a cold. That entirely depends on the weather and baby's temperature; if the weather is dry and the wind is not in the east, wrap him up and take him out by all means. But if it should be one of those damp, foggy, or east windy days, then he will be better indoors, with the window wide open.

I wonder if you have a thermometer? If not, buy one; they are useful things, as long as you are not

always taking temperatures and getting panicky about them. If you do not know how to use one, the chemist will show you. The normal temperature is 98.4; but, in infancy, it is often a little higher. If baby has a cold and his temperature should be 100 or over, do not take him out, for this means that he is a little feverish. Keep him in bed, in a warm room, but always have the window open. You must, of course, see that his cot is out of the way of draughts. The temperature of the room should be 60. This is a good general rule.

Give him plenty of water to drink; you will find that with fresh air, warmth, plenty of drinks and his ordinary feeds, baby will soon be well of his cold. If he snuffles badly, you could gently insert a very little vaseline up his nose. Take care that the constant running of the nose does not give him a sore lip; keep it as dry as you can, and apply some ointment, such as boracic, or vaseline, to the lip.

Unfortunately, a cold may not clear up but may develop into something else. Baby may begin with bronchitis; in this case, he will have a cough, and he will breathe more quickly and with more difficulty.

Still keep the room at 60, and the window open. You will need a fire in the room, and if the attack should become worse, baby will need a steam tent. Doctor will tell you if this should be necessary, for, if baby has bronchitis, it would be as well to call in a doctor.

Registration

The law allows you forty days in which to register baby, but it is always best to do this at once, then there is no risk of forgetting it. If you should leave it over the time allowed, you would have to pay a fine.

Ask your husband to inquire at the local post office or the municipal office where the registrar attends, and go to his office. The following details must be given: the date and place of baby's birth; the baby's sex; the names of his parents; his mother's maiden name and his father's occupation. If the baby's name has been decided on, it can be given at the same time.

There is no charge for registration.

When Will He Talk?

When baby is twelve months old he will have learnt many little words. By the age of two years he is beginning to speak in sentences. He will tell you that "John wants to go walk," quite clearly. Sometimes an only child is backward in speaking. Before you take him to doctor to see whether he has any defect either mentally or orally, try letting him mix with other children, and quietly watch him without his knowing that you are doing so. Very often this will work a cure.

Modern Beauty Culture

EVERY WOMAN SHOULD READ THIS FASCINATING GUIDE TO HEALTH AND BEAUTY

THE woman of to-day is very fortunate in many ways, but her greatest good fortune lies in the fact that she lives in a time in which the care and cultivation of personal beauty is looked upon as perfectly legitimate and natural, not only for the professional beauty, but for every woman, from the humblest housewife to the society woman with thousands at her command.

To-day, personal hygiene paves the way to beauty. Women have learnt many things about their bodies that mists of Victorian prudery shrouded for their grandmothers or even their mothers. Delicate disinfectants, daintily packed and ready for convenient and immediate use are obtainable. Laxatives suitable for every system can be found, so that the perfect working of the bodily functions keeps the blood stream pure and clear, and the modern study of personal hygiene laws shows that the pure blood stream means a graceful figure, for then there are no waste products to turn to superfluous tissue, a clear skin, bright eyes and even lustrous hair, not to mention an elasticity of movement that is thrillingly pleasant.

Water softeners come under the heading of beauty hygiene, because the softer the water used for bathing and washing the body, the more easily are impurities from dust and skin secretions got rid of.

While on the subject of secretions, the disaster of unpleasant body odour is another bugbear killed for the modern woman by modern science. There are many special preparations both in liquid, powder and paste form now obtainable, that kill perspiration odours and any chemist will make up a refreshing dusting powder of boracic powder, powdered alum and iodoform for a few pence.

The washing of hair brushes, combs, and sleeping net caps and powder puffs must be attended to regularly. No longer do women scrub powder into their skins with grimy pieces of swansdown, under the remarkable impression that "dirty puffs powder

best." On many dressing-tables, the pretty glass bottle filled with tufts of clean cotton wool, each piece used once, then thrown away, has replaced the powder puff. All tubes and pots of creams must be closely topped. It is of no use attempting to feed and cleanse the skin with a smutty, impure cream or skin food. Complete and fanatical cleanliness and daintiness must be the keynote of everything used in the search for beauty.

Slimming and the Figure

When fashion decreed that slim modes were to be worn and women immediately fell into line, nearly every doctor in the country cried out in horror. They threatened women with every kind of penalty, from consumption to nervous prostration. They all declared that if Nature had made a woman plump, or, frankly, fat, it was wrong to tamper with Nature, forgetting that wrong living, wrong feeding and lack of exercise and not Nature was responsible for the superfluous tissue. True, there were cases when women slimmed to excess, but comparatively few, and the determination of our dressmakers has been directly responsible for more healthy women of middle age, than anything else. Now opinions have veered right round, and to be overweight is almost a crime, for then the organs, especially the heart and lungs, have too much work to do.

It is the tendency of 90 per cent. of women to put on flesh after the age of 25 unless they take great care.

Diet and exercise are the two great factors in weight reduction, after proper elimination. Starch and fat make fat. Sometimes sugar is included, but it has been now decided by many eminent doctors that some sugar is necessary to help combustion,

An up and down massage of the throat is immensely helpful.

that is, the burning up of any waste products left. The sugar thus taken must be in a pure form and not mixed with fat and starch.

Careful Diet

The fat of meat is the most dangerous fattening material, for it is completely ready to be absorbed by the fat glands in the body. Lean meat, preferably red meat, is the best friend of slimness. It nourishes the nerves and body, and leaves nothing over except the minimum of waste. A pure rye bread, or one of the special dietic breads or biscuits, with red meat, and masses of green vegetables, cooked or raw, fruit, and pints and pints of water, or lemon or orange juice and water, make the perfect slimming diet.

There are special forms of diet, when perhaps nothing but milk is taken for an entire day every week, plenty of milk, about two quarts, but nothing solid at all. There is the orange diet, when anything from a dozen to two dozen oranges are eaten in one day, but nothing else at all, or it may be essence of meat, in jelly or liquid form.

A liquid or fruit day per week is

extremely good, for it gives the organs time to eliminate automatically, all the remains of the food taken into the stomach the day before, sometimes the day before that, and it also completely flushes impurities from the kidneys, which are inclined to secrete poisonous waste. A good recipe for bran muffins is a priceless possession in the household of the woman who wants to reduce.

Among these diets mentioned, there is nothing the average woman, be she a home or business woman, cannot carry out. She may perhaps find it difficult to eat eighteen oranges if she is in business, perhaps a day in the week-end could be set aside for their consumption instead.

The Right Sort of Exercise

Now we come to exercise. The housewife will at once say—"Don't talk to me of exercise. I do enough, surely, in the day."

She may execute much movement of going to and fro, but if she still remains plump in spite of it, the movements are no use to her.

A five-mile walk every day, rain or fine, is the finest and most generally slimming form of exercise, but alas, few can find time or opportunity to walk five miles at a regular swinging page. Shop-pottering is no use at all. Ten minutes' skipping, complete with skipping rope, will concentrate some of the walk into a short time, and that, combined with bending and stretching, viz., touching the toes with the finger tips, the knees meanwhile kept rigid, will do a great deal of good. Especially does the last exercise look after the waist line and heavy diaphragm roll of flesh above the waist.

Deep breathing is wonderfully beneficial, for the oxygen taken in is another consumer of waste tissues. Therefore, it is essential to get into the habit of breathing deeply while walking or standing about. This breathing also exercises the diaphragm muscle.

A very good artificial aid to slimming is the perfectly proportoned and fitted corset, a thing women are apt to forget. They often look upon their corsets as something to keep their

Night and morning massage keeps the nerves of the head in perfect order.

stockings up, but a good make of corset controls and guides the muscles and prevents them from becoming lax and embedded in superfluous flesh.

Skin and Complexion Care

With a healthy body in perfect condition, the complexion should already be good, but the skin itself must have special and regular attention, for it is so fine and delicate it cannot withsand the weather and the conditions under which we live, with our extremes of indoor and out-of-door temperature, our high-pressure living and artificial light, without plenty of help. There are many kinds of textures of skins, and each has to be

separately catered for, but for the purpose of general advice, it is easier to divide them into dry, normal and greasy.

The dry skin needs a large amount of nourishment to prevent it from wrinkling and falling into motifs of fine lines round the eyes, nose, mouth and forehead. The normal skin needs less grease, and plenty of careful, but stimulating massage to keep it in good

Let the eyebrow line be thick and definite.

condition, while the greasy, coarse-pored skin must have cleansing creams that are also slightly astringent, and be given pore-closing packs or masks. A plain, very good, easily liquifying cold cream, of reliable make is the most important cosmetic in the whole big array. With that, some rose water and some cotton wool pads, a woman could travel into the middle of the desert, or be shipwrecked on an island and be sure of keeping her skin in good condition. It is interesting to note that, while we always speak of "cold" cream, it functions best when warm, and should be applied to a warm skin, with warm fingers, in a warm room. This ensures that the oils penetrate the pores and search out all the impurities, at the same time preventing the delicate skin from being stretched. Gluey creams that have to be worked on with hard movements are most harmful, for while the upper layers of the skin have a certain amount of elasticity during youth, they gradually lose it, and soon badly stretched skin refuses to go back into place, and a flabby fold, or a wrinkle, is the result. Among all the astringent creams, a fine lemon one is the best, and while suitable for normal skins, it is particularly good for the coarser, more oily one. Special masks and packs vary very much in accordance with the face on which they are to go. The fine, dry skin, must have an oily pack, the normal one seldom needs a pack at all, while the third type can take a really astringent one, as long as there is a certain amount of elasticity. Some women think a white of egg mask good. That is not so. If, after using the white of egg, the skin is closely examined with one of those magnifying make-up mirrors (which no woman should be without, by the by), it would be seen that it is drawn into a network of minute lines. This treatment is bad even once or twice, but to persist in the treatment is to court a skin like a piece of crackle pottery.

Good Face Packs

Different beauty specialists have their own secrets in packs, and of these one cannot speak, but for home use, one can mention the magnesia, lemon and witch hazel one, in which two tablespoonfuls of carbonate of magnesia are mixed to a cream with the juice of half a lemon and enough witch hazel to make a cream. This

cream will effervesce slightly, and while it is thus working, it should be applied thickly and evenly all over the face and throat. Always apply packs with a wide spatula.

Fuller's earth and milk, with a teaspoonful of almond oil added is a good pack for the coarser skin, while for the fine one, almond meal mixed with milk is successful. The heavier masks of oatmeal, Fuller's earth, honey and oatmeal, etc., are best applied over squares of finest medicated gauze in which slits for eyes, nostrils and mouth have been cut. This allows the action of the pack to work on the skin, and then, when it has dried, it is simple to lift off the remains, instead of having to damp and wash off the crusted mask. A splendid pack for a face with fine skin, tired by a day in the wind, or the office, is one of castor oil and zinc. Get this thick ointment made up by a chemist. Cleanse the face and neck by wiping with a soft towel wrung out of warm water. Apply the cream very thickly. Leave for not less than 15 minutes. Remove with pads of cotton wool squeezed in hot water.

Remember that the essence of a successful face pack lies in having a perfectly relaxed and quiet face during the application. One must lie down flat, not walk about and talk.

Helpful Massage

All massage and face treatment must include the neck and throat. Many people seem to think that their faces are little self-supporting islands. They forget that the nerves and blood-vessels that feed the face and the muscles that support them begin at the neck and finish at the forehead. Necks and throat exercises, such as turning the head from side to side, looking as far over each shoulder as possible each time, while keeping the body rigid, sinking the chin on the chest, then lifting it up skywards, till the head will not go back any further, all the time pulling hard against the muscles, and describing circles with the chin, still keeping the shoulders motionless, are good. An up and down massage, with the palm of the hand cupped round the throat column and using cold cream or skin food is immensely helpful, too. All these face and throat treatments, if begun early in life will keep age at bay, unless bad illnesses come and wipe away all the effects of the good work. Sometimes in these cases, women ask if the disfigurement of loose rolls of flesh, sunken eyes, fallen mouths,

Ten minutes' skipping will do a great deal of good.

The softer the water, the more easily are impurities got rid of.

deep lines on the forehead, and beside the ears, and persistent under-jaw thickness can be eliminated by plastic surgery. One could count on the fingers of one hand, the plastic surgeons to whom it would be safe to go. Never, by any chance, should one have any face-lifting operation performed except by a man who has plenty of examples of his handiwork walking about the world, demonstrating the success of his methods. There are such surgeons, and to most people, their names are household words. By their delicate art, which is now painless, anything from ten to twenty years may be wiped from a face, leaving it natural and pliable, and not, as is often the case with unskilled surgeons, a tight mask of stretched skin that gives a ghastly gargoyle appearance.

Hair Beauty

Hair beauty is no longer counted in terms of hanks. Those who have "plaits as thick as my arm," or who can "sit on their hair" are envied no more. The only comment they call forth is "Why doesn't she have some of that hair off"? Hair itself is no longer admired, but the way in which it waves, shines and fits its owner's head, the way it enhances her personalities and sets off the newest hat are the points that count. Nature plays some strange freaks with hair. Frail, ailing women will sometimes have too much hair, big, healthy, bouncing ones, quite scanty locks. Nervous vitality counts in hair health more than physical strength. However, to the majority of people, health is closely linked with hair beauty.

During any time of trade depression and worry, great numbers of women complain of falling hair, which goes to show that nervous worry takes the life away from hair. Sometimes a vegetarian diet leads to poorness of hair. This is because too much acid fruit is being taken into the blood, and the correct proportions of fat, calcium and proteins are absent.

Cleanliness

Perfect cleanliness of the scalp is quite as important as cleanliness of the hands and face. It is a mistake to imagine that frequent washing is bad for the hair and takes the nourishment from the scalp. It certainly might do if a cheap, harsh shampoo were used, and not rinsed out properly, but women are too wise to do such things now, and those who go regularly to the hairdresser to be shampooed, trimmed, and set must take care to go to a reliable establishment where the best

of everything is used for clients. For dark hair, inclined to be greasy, pine tar shampoo is good. This can be bought from a hairdresser's or chemist. A dash of common vinegar in the last rinsing water gives a beautiful gloss and prevents greasiness from appearing too soon. Fair hair can be kept beautiful by camomile shampoo, made by infusing dried camomile flowers in hot water (a quarter of a pound of flowers will make two shampoos) and by using lemon juice in the last rinse. Once a week is not too often to wash the hair. It should not be left more than a fortnight.

One rinsing water is quite futile, two are not enough, three are absolutely necesary, unless you have a spray, with which every part of the scalp, even every hair, can be washed free from soap.

For Hair That Is Too Dry

Dry hair and scalp can be given necessary nourishment immediately after washing. A minute quantity of oil should be massaged into the scalp and, if needed, on the hair, too, applied by means of a brush of which the clean bristles have been lightly wiped with the oiled finger tips, or with a silk handkerchief, on to which a very little oil has been sprinkled.

A special brilliantine or oil can be bought, but pure olive oil for dark hair, and almond oil for blonde hair, both perfumed with a drop of oil of a flower, are excellent.

Highly perfumed preparations should not be used either for hair or face. The most expensive perfume is sometimes injurious to the skin. It is wrong to forget all about the scalp because the hair does not fall. A little course of tonic should be administered twice a year in Spring and Autumn. The hot castor oil treatment is remarkable for strengthening the roots of new tiny hairs and keeping the colour of the old hairs. Cocoanut oil is also good.

Before the day of the shampoo, make a small saucer of either oil quite hot over a saucepan of boiling water Part the hair in as many places as possible, and apply the hot oil generously all over the scalp. Tie the head up in a hot towel, and, if possible, go to bed with it. If this treatment is given three or four times in succession, lasting over a period of eight weeks, a great improvement in colour, sheen and thickness, will be seen. It is especially good for greying hair. A more astringent treatment can be chosen, when a tonic of pure bay rum, cantharides and jaborandi must be rubbed into the scalp twice a day.

An occasional brushing with common salt is good for the teeth and gums.

Do not neglect scalp massage between whiles, however. Five minutes' massage night and morning keep the nerves, pigment cells and breathing pores of the head in perfect order. Remember that violent rubbing of the hair is not massage. The scalp itself must come in contact with the finger tips, and the finger tips must learn to move the skin on the skull, not merely rub the surface.

The hair-care equipment of every woman, whether she looks after her own hair, or goes to a hairdresser, should include several brushes, hard and soft, combs with large teeth, combs with small, the former for airing and fluffing the hair, the latter for freeing it from loose dandruff and dust, a beautifully-fitting shingle cap, a set of setting combs, setting lotion, cards of gripping pins, invisible hairpins, and a burnishing silk handkerchief.

If dandruff appears, at once take steps to stop it. It is dangerous and may cause an outbreak of spots on the face and neck.

The hot oil treatment is as good as anything, but if something really drastic is needed, an ointment compounded of sulphur and castor oil must be rubbed in, then washed off with an antiseptic shampoo.

A liquid or fruit day per week is extremely good.

Teeth, Mouth, Eyes, Eyelashes and Brows

The high-lights of a woman's face are her eyes, eyelashes and brows, and her mouth and teeth. A beautiful skin and complexion are going to be wasted if the other features are not well-cared for and brought into line.

Discoloured Teeth

Teeth are sometimes given up as a hopelessly bad job, if they are irregular and discoloured. This is a mistake, because a good modern dentist can do so much now. Ugly teeth that are still otherwise good, can be filled, crowned, porcelain-covered, or burnished and polished and straightened, even quite late in life. Numbers of people who think their teeth permanently yellow have been amazed at the change wrought by the use of a different tooth paste, powder or liquid dentifrice. All teeth are composed of the same constituents, but the various human beings have different acids in their saliva, and it is these differences which make it necessary for different dentifrices. It is a good plan to ask one's dentist, to whom a twice-yearly visit is essential, to advise one about a dentifrice.

A delightfully refreshing mouthwash to use, especially for smokers, is

made by adding a few drops each of eau-de-Cologne, peroxide of hydrogen and tincture of myrrh to a tumbler of cold water. Always rinse the mouth with cold water, it hardens the gums. An occasional brushing with common salt is good for teeth and gums.

Keep the lips pretty with cold cream, massage, and plenty of pleasant looks. The last piece of advice is not a copy-book maxim, but a truth. Can you think of a cross-patch, spiteful woman with a pretty mouth?

To Keep the Eyes Bright

Eyes are kept bright, clear and strong by the careful use of the eye-bath, and a good lotion. The whites of the eyes need a tonic sometimes, in the form of a milk bath, which feeds the delicate membrane, and soothes it after a walk in the wind, or a day in the glaring light of sun or electric light.

Boracic crystals in water or rose water makes a soothing lotion for ordinary use, while for real inflammation, a lotion composed of rose water, zinc and boracic, to be made up by a chemist, will be found excellent.

Never bathe the eyes immediately before going out-of-doors. To pluck, or not to pluck the eyebrows. That is the question being asked now. The answer is—do not go in for the thin, Elizabethan brows so much in vogue a year ago, but let the line be thicker and more definite altogether. Every face needs a differently shaped brow, and it is best to let a thoroughly experienced beauty assistant do them for the first time, deciding between yourself and her, as to whether your face takes a long curve, an upward tilt, a half moon, or a nearly straight line. For those who decide to leave their eyebrows unplucked—one word—at least

A very good aid to slimming is the perfectly proportioned corset.

have them tidied up, and any long, straggly ones pulled out, for untidy, bushy brows will age a woman badly. Train the remains with a tiny brush dipped in oil, vaseline or special ointment, all of which will help the growth of thin brows, and darken light ones. Very light eyebrows can now be dyed any shade, from light brown to black. The colour lasts about three months and is quite imperceptible. The cost varies from 2/6 to 5/-, and it is well

worth the money to have pretty, clearly defined brows.

Scanty lashes are a real disfigurement, and steps must be taken at once to get them thicker. Here again, the regular application of vaseline is one of the best things, while the milk bath given to the eyes also helps. Many good special ointments are now on the market for the same purpose, but whatever is used, it must be regularly done, one application a week is of no use—every night is the only way, a tiny speck laid along the upper and lower lines of lashes. If too much is used, it only gets into the eyes.

Feet and Hands

If you see a woman with tired lines round her eyes, and a frown between her brows, it is ten chances to one that her feet are causing pain. There is nothing more ageing than this discomfort, for besides drawing lines of pain and irritation on the face, in time the body will be thrown out of balance, the ankles will thicken and the whole effect will be one of age and heaviness in walking. To-day it is almost a crime to suffer in this manner, for in every suburb and town can be found a reliable chiropodist, who, for a few shillings, will take away all the miseries of hard and soft corns, hard skin, enlarged toe-joints, and ingrowing toe nails.

Once in three months is a reasonable interval for visiting the chiropodist; later, it comes to once in six months, as the feet become more normal.

Tired feet should be bathed in warm water to which a little common soda and some salt have been added. The quicks and nails of the toes need as much attention as those on the fingers, and the orange stick, and cuticle softener should be used at least twice a week after the bath. Tender, perspiring feet respond to a methylated spirit treatment. Take a little of the spirit in the palm of the hand, and, beginning at the sole of the feet, massage with steady, whole-hand movements, from ball to heel, round the heels, then from toes to instep. It is no use rubbing the feet with the finger

Massage with steady, whole-hand movements from toes to instep.

tips, it is not sufficiently stimulating. A good dusting powder, to be sprinkled on, and gently rubbed between the toes, is made of powdered boracic, powdered alum and talc, in equal parts.

Well-fitting Shoes

Do not make the mistake of thinking a pair of old, worn-out shoes is good enough for house wear. Many foot evils come through wearing a down-at-

heel, run-over, too thin-soled pair of shoes. Let the shoes be light, of course, but see that the soles and heels are as in perfect order as those for a party. It is not for the look of the thing, but because those hours spent in the house, standing and running up and downstairs can make or mar the feet in time.

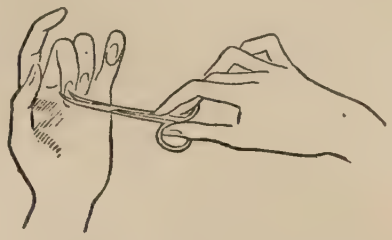
Practice running upstairs on tiptoe to strengthen and slim the ankles, and keep the arches from falling. Take off shoes and stockings sometimes and work the toes and ankles about to make them supple.

Smooth White Hands

As for our other extremities, our hands, they require a lot of hard work and careful attention to keep them lovely, for no part of the body turns sulky so quickly as neglected hands. A good circulation is always half the battle, for then the skin certainly has a good chance of being white, and in winter, free from ugly chilblains, so the exercises that help to keep the body slim and trim will also help to make the hands pretty.

Hands age quickly, so plenty of cold cream must be used to prevent the skin from getting that closely-grained, wrinkled appearance. Pure honey, with lemon is beautifying. A dessertspoonful of honey and the juice of half a lemon, massaged into the hands like soap, then washed off with tepid water, is an excellent remedy for chapped, rough hands.

Some French women swear by a cream made from mutton fat. This fat has to be melted down, then refined several times by pouring on it boiling water. Finally, while it is warm, in a jar over hot water, it is beaten with a fork, with a few drops of oil of lavender, or verbena, and some olive oil, in proportions of one teaspoonful to each tablespoonful of other fat. A little of this home-made ointment rubbed well into the hands, and a pair of large old gloves slipped on, and left for an hour or so will both soften and whiten the skin. Frequent "glove-fitting" massage is good for the skin and the joints.



Hands require careful attention to keep them lovely.

Brittle finger nails can be strengthened by digging the finger tips into a half lemon, and by massaging warm olive oil into them. The application of a good make of nail varnish also toughens them, but a cheap varnish makes them split more easily than ever.

General Make-up Hints

Blondes and brunettes no longer buy for themselves one shade of powder in their lifetimes, and one lipstick, and remain faithful to these shades all the time, simply because these are the colours commonly sold for their complexions.

Modern beauty culture has taught women many clever litt'e tricks, but one of the best is the use of different make-up according to our clothes. And this method is very successful. Remember how attractive our blondes look in the summer time, when they have a heavy sunburn make-up, with their yellow,

white and shantung-coloured frocks and pyjamas.

Now we seldom see a woman with pink and white colouring, using natural or pinky powder and rose lipstick when she is wearing a rust, reddish-brown or orangey hued frock or suit, instead, she will bring her colouring into line by the use of rachael, rose ochree or rachael soleil powder, or one of the shades which tend towards the brunette tints, and a lipstick with an orange tinge.

Once a week is not too often to wash the hair.

The thing to do to-day is to buy, not one box of powder and one lipstick, but many different shades of powder in quite small quantities. Many beauty shops sell powder by the ounce or even half-ounce, and one can also get little boxes containing several miniature sticks for trial purposes. Then tiny pots or boxes of rouge must be matched up with the lipstick, although less rouge is used now than of late. Powder and lipstick are the more important items.

Take green powder, for instance. The florid, easily flushed skin loses its uncomfortable colour like magic beneath a delicate coating of lily-green powder, which, of course, never looks green on the skin. If white or pearl were used in the same circumstances, the result would be mask-like and unnatural.

A light dusting of mauve or orchid (not violet) powder beneath the eyes makes ugly under-eye shadows and lines less noticeable, and a dusting of it on a throat where the skin is inclined to be brownish leaves it whiter and more delicate.

Eye-shadow is used more frequently now than formerly, but few English women look well with it on in the daytime. For them a trace of oil on the upper lid is sufficient to give the eyes a lustre. A little electric blue shading on the eyelids at night tends to make small eyes appear larger. A delicate mauve will make creased lids look younger, while green gives to pale grey or hazel eyes more colour. If the shading is the least bit overdone, the face will look dirty and smudgy.

A liquid or paste mascara for the lashes is often an important asset. Let this be applied very daintily, so that no minute spatters spoil the clear-cut tidiness of the face.

Choose a make of mascara that will neither dry and crumble, run or, above all, smart if any gets into the eye. Always remove it at night, first with a damp flannel, finally with vaseline.

In fact, clear off all make-up, both at night and also during the day, when putting on a second application.

The best way to do this is to smear the whole face and throat with a quickly melting, penetrating cleansing cold cream. There are several excellent makes from which to choose.

The Dangers of Middle Age

THE urge for living dies hard, and it is most people's unformulated desire to achieve the Psalmist's "three score and ten years," provided that they can remain in reasonably healthy possession of their faculties. That so few do is attributable to the fact that so many abuse the vitality of middle age.

Middle age is a critical milestone. Past the forty-five year mark, the peak of effort has been reached, the level ahead is insidiously downward. This unwelcome truth has to be recognised and faced frankly. Our diet, our activities, both mental and physical, cannot continue on the old lines as if the body had not changed with the passage of years.

Age brings not only a restriction of outlook and a drawing in of interests, but sets a limit to the amount of our enterprise. The body grows less elastic, muscles are more easily ruptured and ligaments strained. Owing to unsuitable diet and lack of exercise the average person has become soft and flabby by the age of fifty, unless he has kept strictly in training, which few are so fortunate as to be able to do. A prominent stomach, more politely alluded to as "that middle-age spread," is not unseldom the penalty for prospering and "easing off." With this release from the stern necessity of working hard for a living comes a train of distressing symptoms. The full abdomen implies weakened abdominal muscles and a "dropping down" of the contents; and the result is flatulence, constipation, and defective elimination.

Blood Pressure

Poisons mount up in the body and lead to deterioration of the body cells, rendering them more prone to bacterial infection. The heart is insidiously embarrassed by an accumulation of fat around it. The arteries become thickened, hard and brittle, incapable of adequate functioning long before their natural time-limit. Inevitably, there is an elevation of blood pressure, and this rise, along with the general bodily enfeeblement, provokes those disorders to which thoughtless middle age is subject. The period of life between forty and fifty years is the time for a thorough mental and physical stocktaking. It is the Rubicon, a critical decision has to be made—whether to take the line of least resistance and just go on drifting downward or to make a real fight

against fat in pursuance of the mellow contentment of old age. When the argument is well weighed, few there are who will not choose the more courageous course. It is really only a matter of establishing a habit—the habit of simple and healthy living.

Moderate Exercise

Adaptation and moderation is the secret of longevity. Moderate exercise, moderate eating, moderate drinking, moderate smoking are the keys to our ambition. No longer will the old strenuous exertions serve. Exercise must now be gentle, never violent or spasmodic. Age cannot walk hand in hand with youth, however youthful the spirit. Even golf must be played rationally, *one* eighteen-hole round a day is sufficient for the sedentary middle-aged individual at his best. Moreover, no competitive contests should be engaged upon. They entail worry and anxiety—states calculated to raise the blood pressure. On top of this, a jerky unbalanced stroke, an undue effort of any kind, in the heat of the struggle, may conspire to lift the already raised reading beyond the safety level.

One of the safest games for the elderly is the game of bowls. Here the exercise is even and regular, there are no sudden movements to stress the system, and the unhurried play allows both body and mind to reap full advantage of the air and sunshine. Medical opinion is unanimous that walking is the best and safest exercise of all. This the game of bowls provides in the walking up and down the green; in addition, it supplies a high-grade system of abdominal massage—the continuous bending movements which are so valuable an antidote to constipation.

Bowls is, of course, a Summer recreation. In the Winter, the natural and proper substitute is walking. A walk of at least three miles should be taken daily whatever the state of the weather. Wet will do no harm provided that all damp clothes are changed immediately upon the return home. At the outset, don't attempt too long or too energetic walks. Break yourself in by easy stages, increasing the length and duration of your exercise day by day.

Morning Exercise

Those who cannot or will not heed wisdom, who still wish to share in the pastimes of youth, should especially bear the foregoing advice in mind. Include in your schedule ten minutes' morning exercises of a gentle and rhythmical nature for the purpose of loosening the joints of the upper extremity and of preventing the muscles and ligaments from stiffening too prematurely. Follow this with five minutes' deep breathing exercises before an open window. With the advance of age, there is a tendency for the bones of the chest wall to become rigid unless they are kept pliable by some system of "breathers." It is this loss of mobility that hinders the full and free expansion of the lungs and contributes to the bronchial afflictions of the elderly.

Moderate Diet

The same principle of "temperance in abundance" must govern the diet of middle age. Meals should be carefully regulated and balanced. Large and heavy meals are to be avoided as they impose too severe a strain on the heart, through overloading the stomach. It is best to limit the meals to three a day, with no "snacks"

in between. All food should be chewed slowly and thoroughly. After the age of fifty, the body is capable of little constructive work in its own house, so, large amounts of flesh-forming foods such as meat, cheese, fish and eggs are unnecessary. Few physicians have a good word to say for red meat, which if eaten to excess conduces to degenerate changes in the kidneys and arteries and increases the viscosity of the blood. If meat must be taken, let it be only once a day, in a minced or finely scraped form. But it is best to drop it altogether and replace it by cheese, milk and eggs, which are the equivalent protein foods.

A walk of at least three miles should be taken daily.

Sugar should only be taken sparingly. Soft bread, which is easily fermentable, should be replaced by crisp toast or rye bread, eaten with cheese or broken into soup or broth.

Salads and vegetables may be included liberally in the diet and one meal at least should conclude with some fresh fruit. Stewed apples by virtue of their laxative, cooling and acid-neutralising properties are most beneficial for flatulent dyspepsia; moreover they will not harm the most delicate digestion.

A minimum of three to three and a half pints of fluid should be drunk daily. Barley water lemonade, home-made from fresh lemons and good pearl barley, is a splendid kidney cleanser. Tea, preferably one of the good digestive brands, should be drunk weak.

Alcohol and Tobacco

Alcohol should be consumed only in strict moderation and then only with or just after meals. The amount of alcohol which can be tolerated is determined by the effectual working of the excretory organs of the body—the lungs, skin, kidneys and bowels. The more the elimination the better the toleration. If therefore the pores of the skin are acting properly, the lungs are expanding fully, and the kidneys are kept well flushed, the volatile poison may be entirely expelled without ill-effects. When the body "works" are not running smoothly in this respect, common sense dictates that the alcoholic consumption should be reduced or cut off entirely. A tonic Burgundy, such as Tintara, will be found beneficial from time to time.

With regard to tobacco, each person is a law to himself and should know how nicotine affects him long before the age of fifty is reached. A limit, however, should be imposed to the amount of tobacco smoked per day, an amount which must vary according to

the toleration of the individual. A good average is ten to twelve cigarettes a day or its equivalent in pipefuls of smoking mixture. Cigars are best eschewed altogether. There should be no occasion to warn the smoker how detrimental inhaling or smoking from a fouled pipe is to health. If breathlessness, palpitation, sore tongue or mouth ulcers occur, smoking should be immediately given up.

The Mouth and Teeth

The mouth is in need of constant care and attention during the critical years of middle age, when pyorrhœa is so common. A regular and thorough morning and evening brushing of both teeth and gums, *up and down* as well as from side to side. Glycerine of Thymol mouthwashes, the careful chewing of an apple last thing at night and a six-monthly visit to the dentist will do much to ensure freedom from this mischief-making complaint, and its possible consequences—Arthritis, Rheumatism, Anæmia, Indigestion and the many internal septic troubles to which it may give rise.

Sound teeth and healthy gums are essential to health. Apart from any question of sepsis, proper mastication of food is the first and not the least important stage of digestion. Food, inadequately chewed, imposes too great a tax upon the stomach and other digestive organs of middle age, or indeed of any other period of life.

When you think of the dentist, think of the doctor, too, and visit him for a thorough overhaul of the heart, blood vessels and kidneys. One examination is not complete without the other. The whole body needs a periodic review if the autumn of life is to be attained in the most agreeable manner.

The Problem of Sleep

As age advances, sleeplessness is liable to give rise to a great deal of worry and anxiety. This invariably sets up a viscious circle. The more the worry, the more the insomnia and *vice versa*. Yet there is no reason for distress, since age, unlike youth, can do with—and even thrive upon—very little sleep. It is of little consequence whether the elderly individual sleeps four or eight hours *so long as he is feeling well*. Indeed, resting quietly in bed is, in many respects, very nearly as satisfactory as actual unconsciousness.

The amount of sleep or rest that is requisite must depend upon the personal factor. The average is eight hours, but many can keep well on less. Too much sleep can be as harmful as too little; it tends to produce mental and physical sluggishness.

Those who are troubled with insomnia should first try to woo sleep by physiological means before resorting to sedative drugs. No heavy meal should be taken within four hours of bedtime. Avoid hard mental work or exciting literature before retiring. Assist the sleep habit by going to bed at a regular hour each night, immediately after a gentle stroll. Cold feet should not be permitted to interfere with sleep, when there are rubber hot-water bottles to be had for the asking. Warmth is very necessary, but avoid over-doing the amount of bedclothes.

The bed is best placed lengthwise, due North and South. The mattress should be firm and without sag. For the average person, a low pillow with no bolster beneath is to be preferred, as the body is healthiest when the head and spine are lying as straight as possible. But those who suffer

from their heart will find that a well-raised pillow is the most comfortable and the most advantageous to sleep.

The bedroom should be adequately ventilated with at least one window partially open.

Sleep may, if necessary, be assisted by a hot bath followed by a warm drink, though it should always be borne in mind that hot baths are weakening if indulged in too frequently. Those who awaken in the night only to find it difficult to drop off again should provide by their bedside a Thermos flask containing some warm gruel, broth, Ovaltine, cocoa, or malted milk which can be sipped, along with a biscuit or two when need arises.

The Afternoon Nap

There remains to be discussed the afternoon nap and the ordinary man and woman of middle age. Many people who are in the habit of having a quiet "snooze" in an arm-chair will note that on waking they have a dry mouth, a possible crick in the neck, and a general feeling of unmerited jadedness. None the less, directly they begin to work once again this feeling will disappear at once, and they will be all the better for those snatched moments of sleep.

It is amazing what tremendous recuperative powers lie in a few minutes of relaxation with eyes shut and sleep hovering, if not actual sleep. Many hours can be worked at a stretch during periods of high pressure by this expedient.

Anyone who really feels the need of a siesta during the day will be the better for taking it. If you enjoy an afternoon nap and feel better for it, well and good; but don't sleep for the sake of sleeping. You must judge for yourself by the results.

The Mental Outlook

The care of the mind is not less important than the care of the body. It is the mental conflict of reality with desire that disposes to much of the dissatisfaction of middle age. We know what we want to do; we have learnt by experience how to do it, but the personal machine works no longer in the old gay-hearted manner.

To escape a sense of defeat and the disharmony it brings it is very necessary to realise that the passing of youth is Nature's law and that the powers and charms which remain are not to be despised because they are changed and limited. There are satisfactions exclusive to each and every age and the wise person will not spend long pining for those which are impossible but will set himself to fall into line with his schoolfellows and share in their common experiences and pleasures.

In social activities, in some congenial occupation or hobby, faithfully pursued, introspection can be routed and that mental flat feeling avoided. Seek to cultivate new and fresh interests. Grooves are gravestones. The individual who possesses but few ideas is himself apt to be possessed by them. Endeavour to keep cheerful and remember that "a merry heart doeth good like a medicine, but a broken spirit drieth the bones." The mind affects the body even more profoundly than the body affects the mind. So give your body the best chance for health and longevity by putting your mind in good humour with itself.

I have little space to discuss psychology, but I believe it is possible

to overcome depression by forcibly turning the mind into other channels. The possibility of this was well demonstrated to me during the war. When I was overseas in 1914, I was given a postcard with the two words, "Keep smiling," printed in big type. I kept it with me and it earned a prominent place in dugout or billet because of its constant reminder, which on countless times cured depression, discomfort, and trouble.

This may sound platitudinous. The point is that people simply will not try to cultivate cheerfulness for its own sake. They accept a low-spirited condition like a martyr, when a brief consultation on some other matter would probably dispel the entire mood.

Self Cure

To a large extent, given a helping hand, the cure rests with the sufferer himself. If you are beginning to feel that life has lost the savour that it ought to have, then you may be fairly certain that something is wrong with your mode of life.

It means that you are not having your proper rations of work and play, exercise and food. You are sacrificing one part of your life for another. Until you adjust the balance, you cannot hope for happiness and well-being.

If, however, you find that you are being thrown too much inside yourself, that introspection is becoming a menace instead of a help, then seek for some new interest, preferably out-of-doors. The prospect will not be attractive. You will be fully persuaded that it is useless, but if you make the effort, your dissatisfaction will ultimately disappear.

Remember that you are merely a middle-aged person—not an old man or woman. Do not waste precious time; resolve to be well, and to appreciate what remains to you of the supreme gift of life.

One of the safest games for the elderly is the game of bowls.

The Care of the Aged

LOOKING after old people is in many ways like looking after little children. Their lives have to be orderly and must be arranged for them. They get upset if the routine of life is disordered.

The very old need few things. They must have warmth, a comfortable bed and chair, regular meals of a type that they can easily digest, plenty of sleep, and lastly, people around them whom they know, or failing this, people who are kind to them.

Warmth and Fresh Air

Old people must be kept warm. A regular temperature of 60 is the coolest they can do with. If there is any tendency to chest complaints, such as bronchitis, then the room should be kept nearer to 70 than 60.

But fresh air is also a necessity. If they do not get a sufficiency, they will undoubtedly get bronchitis. This need of fresh air and warmth makes a fire a necessity almost all the year round.

The old must be kept from draughts. A draught is fraught with danger to an old person. So see that the bed or chair is always carefully screened against the slightest chance of draughts.

Whenever possible, old people should be taken out daily, unless the wind is very cold or unless there is a fog. This daily outing must be of a type that does not tire them. If they are allowed to get overtired, more harm than good will result. So the daily airing should consist of a quiet walk on the level, or a ride in a bath-chair or a drive.

When out of doors, see to it that they are well wrapped up. In old age the circulation is very slow and poor. Walking can only be done slowly, and certainly not fast enough to keep warm, and so cold is easily caught. Plenty of wraps are therefore a necessity. But see to it that the wraps are not heavy. The aged have no superfluous strength for bearing weight.

When planning the daily stroll, choose a way that is sheltered, and on the sunny side of the road. Point out anything you notice that you think likely to be of interest, but do

not get impatient if they display no interest.

Cleanliness

A daily wash all over is needed. If in any way possible, a daily bath is better than a wash. Often a bath once a week at least can be managed with help if a little thought is given to the matter.

If rheumatism, resulting in some stiffness to the joints, is present, difficulty may arise when lowering the patient into the bath. This can be largely overcome by using rough towels. One laid along the side of the bath will give a non-slipping surface to be gripped, and one passed round a tap can be held firmly while the assistant holds the patient under the arms whilst standing behind him. Then another towel laid along the bottom of the bath when getting out will lessen the tendency for the feet to slip and so confidence will be given.

The bathroom should, of course, be warm, and the drying after the bath should be rapid. Then only good should be the result.

If the patient is bedridden, a bath is out of the question. In this case, the daily all-over wash must be resorted to. Never dawdle over this; get everything ready before starting, and do not uncover more at a time than the part you are going to wash.

Comfort

A comfortable bed is a necessity to an old person. A single bed with a woven wire mattress, and a hair mattress is the best kind to have. But many old people are accustomed to sleep on a feather bed. Unless they are incontinent or quite unable to be lifted out to have the bed well shaken daily, there is no point in depriving them of this. The feather bed will often be found warmer for them, and once used to it, they would not sleep so well on a hard mattress.

An old person likes to have his own particular chair in his own particular corner. The chair must be a comfortable one, and should have the cushions in it that its owner likes. A light rug to cover the knees will be found a comfort, especially in cold weather.

Incontinence of urine is a fairly common trouble in old age. There is nothing that can be done to cure it, so when looking after people with this trouble, you must concentrate on keeping them as dry as possible, and free from bedsores.

These sores are very difficult to prevent in old age, especially if the person should be very thin. The circulation is so poor that pressure for a comparatively short time may result in a sore. And once a bedsore appears, it can take months to cure, and may even spread until the bone shows and the patient dies. Therefore, constant care and watchfulness must be exercised. All prominent places, such as the hip bones and the lower part of the spine, must be rubbed at least twice a day with soap, and then with warm olive oil, and finished off with antiseptic dusting powder.

An air ring or cushion will often be found a great help in preventing pressure on the back. This cushion should be covered with a pillowcase before being placed in position, or the tender skin may stick to it, and a sore place will come when it is taken out.

An incontinent person should have a macintosh under the bottom sheet. It should reach from under the pillow to the foot of the mattress. There should be another short one over the sheet, with a drawsheet over it. Only in this

way can the mattress be kept clean and dry. Small pads made of sphagnum moss, or tow, absorbent wool or even old, clean newspaper torn up small and placed in little bags of old linen, can be placed under the patient, and in this way the work of cleaning up and keeping dry can be considerably lessened.

Diet

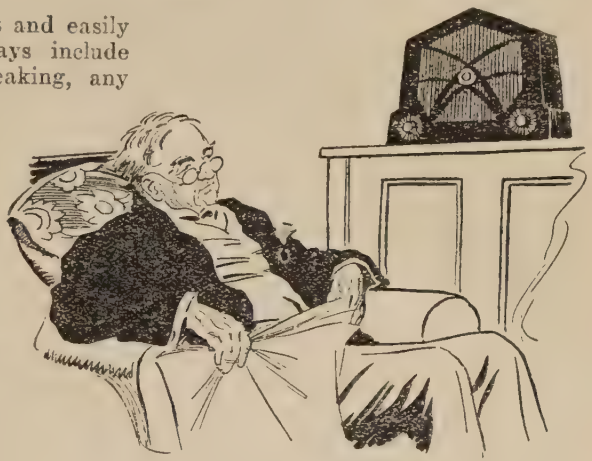
The diet should be light and easily digested. It should always include some fruit. Generally speaking, any food served should be of such a nature that it does not require much chewing. If it does, then it is often swallowed before it is properly chewed, and indigestion is the result.

Old people often like sweets and sweet things. There is no reason to deny them these things. Sugar is a quick producer of heat, and is easily digested. Of course, in some diseases sweet things are forbidden, but a healthy old person may eat as much sweetstuff, within reason, as he likes.

Greasy foods are inadvisable, as they are not digestible. Much food at any one time is to be discouraged. Little and often should be the rule. A light breakfast, a little of something, such as Ovaltine or "Horlick's," mid-morning, a walk, midday dinner, afternoon tea, early supper of something easily digested, and a drink on retiring would be the usual thing for an old person.

Old age demands much sleep. But as people grow older, they often find it increasingly difficult to sleep for long hours at a time. Therefore they should always have a daily rest, just as a child would. If they lie awake during the night, it is a good plan to have a hot drink ready in a thermos flask. This, with a biscuit, may send them off for another hour or two.

The very old are like children and must be carefully watched as to the action of the bowels. They need to be



Encourage the old to listen to the wireless.

encouraged to perform daily. If there is any trouble about this matter, it is far better to give them a mild aperient regularly, rather than to administer a drastic purge at intervals. This latter is weakening. Liquid paraffin, milk of magnesia, and senna tea are all mild things that can be given daily if necessary with perfect safety. The senna tea should be made by soaking the pods in cold water for twelve hours. If made with hot water it causes griping.

Happiness

Old people should have familiar faces about them. They live chiefly

in the past, and are easily bewildered by strange faces and ways. Remember that moving old people to strange surroundings, such as to a new house or to the infirmary, will often depress them so much that they may die, just from sheer bewilderment and heart-sickness.

Be kind to the old and humour them whenever possible. But take care never to let them rule you through sentiment. They are very liable to turn into tyrants. Do not allow them to think that they and they only, matter in the house. But do not let them feel that they are in the way or that they have become burdensome. It is a tragedy to see some old person grudgingly looked after, longing for death to release him because he knows only too well that no one needs or wants him. Never have this on your conscience.

If there is any little job that an old or infirm person can do, let them do it. If they can write letters, let them be the ones that act as a clearing house for news to the family. If their sight is good, see if there is not some mending that needs doing when they are sitting with nothing to interest them. A good knitter can always find someone glad to receive the results of her labour. Most families have some children where a woolly jacket would be welcomed. Encourage the old to take an intelligent interest in other people, and to listen to the wireless. The programme they select may not be your taste, but it will please them. Children are often very fond of old persons. Two extremes of age seem to get on marvellously well together. In this way anyone may be old in body but young in spirit.

You may find it difficult not to lose your patience when an old person tells you just how and when to do your own job, or when they make a terrific fuss about some small and trivial matter or when it seems utterly impossible to make them understand anything. Losing temper will do no good. They are old and must be treated as such.

Sick Nursing in the Home

NO-ONE CAN KNOW TOO MUCH ON THIS ALL-IMPORTANT SUBJECT

SERIOUS cases of illness, bad accidents and some infectious cases, will always have to go into a hospital to be nursed. Other cases, not so serious, can often be nursed at home by those possessed of a little knowledge of what should be done. I want to tell you a little of what you should know if you are to nurse a sick patient in your own home.

If you have any choice in the matter of the sickroom, choose one that gets the evening sun rather than the morning sun. If the room is bright with sunshine in the early hours, many people cannot sleep, and sleep is one of the most important things in illness. The room should be as quiet as possible, therefore one that faces a garden would be preferable to one looking out on to a main road.

Preparing the Sickroom

If there is time to clean out the room before the patient enters it, so much the better. The walls should then be brushed down, the floor scrubbed, and all the furniture dusted with a damp cloth. The pictures should be taken down, and all unnecessary ornaments should be removed. You see, all these things collect dust, and dust carries germs, which must be kept from anyone as much as possible, so never have more things in a sickroom than are necessary. It can be kept bright and cheerful with sunshine and flowers.

All that is strictly necessary in a sickroom is a bed, with a bedtable or a small table by the side, a table to hold the things you will need, such as pen and writing pad, a chair for visitors, if they are allowed, and perhaps one other chair.

The chimney should not smoke if there is to be a coal fire in the room. If there is a gas fire, it should be examined to see that it is in order. Modern gas fires are good and are quite safe. It is not at all necessary to remove them in case of illness, as so many people think. An oil stove is

not a good thing to have in a sickroom. The light, whether gas or an electric bulb, should be shaded so that it does not shine straight into the patient's eyes.

If there should be any danger of a draught round the bed, have a screen in the room. If there is not one in the house, a useful one can be improvised from a clothes-horse covered with a sheet or with a piece of cretonne.

The room should be kept at a temperature of 60, as a rule. This is hot enough for almost all cases, except for very old people and a few cases of bronchitis. The air should always be fresh. Unless the weather is so warm that the window can be kept open, the best way to keep the room ventilated and yet not draughty, is to have a board cut the length of the window and six to eight inches wide. Raise the lower sash of the window and put in the board. Then you have a gap at the centre of the window through which the air circulates.

The Bed, and How To Make It

The best kind of bed to use in a sickroom is an iron bedstead with a woven wire mattress. On this should be a hair mattress. A feather bed should never be used, unless it simply cannot be helped. It cannot be properly made in illness, and the patient sinks into a hollow. Also on a feather bed the patient is more likely to develop bedsore than on a hard mattress, because of the difficulty of nursing.

The bed should be made up by having the under sheet put on, and tucked in firmly all round. Remember always that wrinkles in a bed are uncomfortable and lead to bedsores, and a bedsore is a disgrace to a nurse. Now put the pillow in place. Next you will need a piece of macintosh. This should reach from just under the pillow to below the patient's hips. It will save making the whole bed up again if there should be any accident with a bed pan, and will give the patient a cool place to lie on if it is drawn through once or twice a day. A large piece of tarred paper will do instead of the macintosh if you are unable to get one.

The macintosh is covered by the draw-sheet. A piece of unbleached calico or an old sheet, folded lengthways and twice the width of the bed, will do for this. It should be tucked tightly in one side, rolled up and tucked in the other side of the bed. Then finish making up the bed in the usual way. Only please do not put a heavy quilt, such as a crochet one, on the bed. These may look pretty, but they get so heavy and tiring in such a short time. A clean cloth should be spread on the table and a bright rug on the floor finishes the preparation of the room, except for one thing. If the window rattles, buy a wedge. It is nerve-racking to lie and listen to a noisy window.

If the patient is not allowed to get out of bed at all, a bedpan will be necessary. These can be hired from a good chemist. The best shape is that known as the Perfection. It should always be warmed before being given to the patient. If she can help herself, she should draw up her knees, and dig her feet into the bed, at the same time holding on to your arm. With your left arm you raise her buttocks, and slip in the pan from the side. It is removed in the same way. The pan should be well rinsed after use, and thoroughly washed with hot water once a day.

The Daily Toilet

A sick person should always be washed all over every day without fail. This should never be neglected, unless by doctor's orders. No person is ever too sick to be washed. Poison is carried away from the body by perspiration, and if this is not removed by the daily wash, the pores of the skin get clogged and the body is not able to get rid of the poisonous germs. You should make sure that you have everything ready before you begin to do the washing. You will need a basin, hot water, soap, washing flannel, and two towels, and a comb and brush. It will be a comfort if there can be two nightdresses in use, one for the day and the other to change to at night. The window should be closed during washing. It is best to start with the hands and face. Then remove the nightdress, cover up everything except the part that you are going to do, slip a towel or old blanket under that part to protect the bed, and continue washing. Never have all the body uncovered at once, or a cold may result. See that all parts are thoroughly dried, slip on the clean nightdress, and attend to the hair. If the hair is long, it is a good plan to do it in two plaits. This prevents tangles. Now attend to the nails if necessary, help the patient to clean her teeth, and tidy away your things.

It is best to start with the hands and face.

Reporting To Doctor

It is very necessary that the doctor should know all about his patient if he is to do his best for her. So you must remember to report everything to him. Of course, there is no need to keep doctor standing about while you tell him everything that has happened since he was there last. You must tell him the necessary things.

Always take care to be accurate. Don't say the patient has no sleep, if she had twenty minutes' sleep. Don't say you think she took her food. Be sure.

The best way to remember all the things you have to report is to have a sheet of paper and to write down on this, in order, what has happened. For instance, you could note that she slept from 11 to 12; that at 12-30 she had three ounces of Bovril and a spoonful of jelly, etc.

Get doctor's orders as to diet and stick to them. If a fluid diet is ordered, don't add a wafer of bread and butter. It may do no harm, but, again, it may do a great deal.

Watch and report on patient's position in bed, whether she lies on the side or the back; curled up and head down, or on her back. Note if she is still or restless; whether she is coughing, and if so, what the cough is like and whether it is frequent. Measure how much nourishment she takes and how often; how long she sleeps; if she vomits and how often and what it is like; how often the bowels are opened and how often water is passed. Take and write down the temperature twice a day and four-hourly if necessary, and when you can do so, the pulse and respiration. If you notice anything out of the way, such as blood being brought up or blood in the water, save it for doctor to see. In some illnesses doctor will want to see all the motions that are passed. In this case, you must wring a cloth out of some disinfectant and cover over the chamber with it. The chamber should, of course, be put in the lavatory, never left in the sick-room.

Points That Need Care

You must be very accurate about measuring out medicines. A medicine glass can be bought for less than a shilling, and this should always be used. The ordinary household spoons are seldom accurate and an overdose of some medicines can be very serious. Medicines should always be given at the times ordered. A medicine that is labelled to be taken every four hours does not mean that it will be sufficient if it is taken three times a day. It is usually safe to add an equal amount of water if the patient will take it more readily so.

Another thing that you should all buy and learn to read is a thermometer. If you do not know how to read the thermometer, the chemist will show you when you buy it. Remember never to place it in hot water or you will break it. It should be washed after use in cold water. If it is being used for more than one person at a time, it can be kept in a small jar filled with disinfectant and washed in water before using as well as afterwards. The safest way to take a temperature, at any rate with a child or restless patient, is to put the thermometer under the arm or in the groin. It should be kept there for two minutes. Never take a temperature in the mouth if the patient has just had a drink or washed his teeth. It would not be a correct reading.

Remember that an attack of shivering in a sick person is a sign of feverishness. Very often an uncontrollable attack of shivering is the start of a bad illness. It should always be reported to doctor. The patient should be covered warmly, a hot water bottle should be put in the bed, and a warm drink given.

When using a hot bottle, care should be taken to have a cover on it, and it should never be placed against the unprotected skin. Many a severe burn has resulted from putting a hot bottle against the leg of a paralysed or an unconscious patient, who has not felt the heat until too late.

It is very necessary that a sick person should have the bowels well opened every day. If she should miss a day, then tell doctor and ask him what aperient may be given. Do not give one without asking or you may do more harm than good. You may unknowingly give one that does not agree with the medicine doctor has prescribed.

To Avoid Bedsores

If a patient is in bed for more than

In some ways, children are easy to nurse.

a few days, it will become necessary to prevent her getting sore. Bedsores are caused through wrinkles in the undersheet and macintosh; by crumbs in the bed; by dampness, and by pressure. It is your business to see that the bedclothes are kept tightly tucked in, so that they cannot be wrinkled, and to see that no crumbs are left in the bed. Sweep your hand round the bed after meals, and remove any there may be, and if necessary, draw the drawsheet. Never allow the undersheet to be damp. Pressure may be helped by moving the patient in bed from time to time, so that she does not always lie on the same spot. She might lie for two hours on one side, then two hours on the other, then on the back for a time.

The places most likely to get sore are the elbows, heels, shoulders, hips, ankle bones and the lower part of the spine. These places must be well rubbed at least twice a day. Well soap your hand and rub round and round. Then dry thoroughly and rub again with a little warm olive oil, collosol iodine oil or methylated spirit. The first two are the best to use, as methylated spirit tends to harden the skin, instead of keeping it supple. If you use methylated spirit, get the surgical kind, not the ordinary kind that is coloured purple. Finish off by dusting with a good antiseptic powder or with starch powder.

Feeding the Patient

When a patient has to lie in bed with only one pillow, feeding may be difficult. But a little thought will overcome this matter. All fluids should be given in a feeding cup. This should not be filled full or it will spill over. Place a cloth under the chin, and gently raise the head by putting your left arm under the pillow. Now guide the feeding cup to the lips. See that you hold it so that the fluid can flow down the spout. Don't expect the patient to empty the cup at one gulp, give her time to take a breath.

If some solid food is allowed, cut it up into suitable bits. Feed with a spoon, but remember that as soon as possible the patient will like to feed herself. Make things like this as easy as you can.

A sick person is often difficult to feed, because they don't fancy the food. It is your business to see that they do eat. A daintily set tray, with just enough food, may make all the difference between a meal taken and one sent away.

Don't ever be tempted to think that a soiled traycloth doesn't matter, that thick slices of bread and butter do just as well as thin rolled-up bits, or that a cup of tea poured out and cooled by carrying upstairs is as appetising as a cup poured out at the bedside from a

small teapot. All these things may sound little things and fussy, but to anyone who is ill they make all the difference in the world.

Don't ask the patient what she would like to eat. The effort of thinking about food may take away her already far too small appetite. Prepare something as daintily and as well as you can and take it in. A small serving will often disappear when a large helping would not be touched.

The Prevention of Infection

When nursing any infectious disease, care must be taken to prevent the infection spreading to others. No one should be allowed in the sickroom except the person looking after the invalid. The floor should be gone over daily with a damp cloth and all dusting should be done with damp cloths. Dust should be burnt. Rags should be used instead of handkerchiefs unless the cheap paper ones are used. All these should be burnt.

Bedlinen and clothing should be soaked in disinfectant before being washed or sent to the laundry. When the bedpan has been used, disinfectant should be added to the contents and it should be left to soak for half an hour before it is emptied.

Any crockery used for the patient should be kept for her use alone, and should always be washed separately from that used by the rest of the household.

All books or toys taken into the room should be burnt after they are finished with, unless it is possible to disinfect them thoroughly.

After you have done anything for the patient, you should always wash your hands in disinfectant. It is a good plan to have a basin of this always ready just inside the door, then it is not likely to be forgotten.

In the sickroom you should wear an overall. It should be taken off when you leave the room and hung up behind the door. Often the doctor will like to have one kept for his use also. Of course, the daily bath should be given. It is more important in an infectious disease than at any other time.

When a patient has recovered from an infectious disease, he should be given a bath and fresh clothing before he mixes with other people.

Then the room must be attended to. The best disinfectant to use for this is fresh air and sunshine. Throw open all the windows and leave them so for at least twenty-four hours and as much longer as you can. All rugs, and bedding should be taken out into the garden and left to air, being frequently turned about. Then the room should be given a thorough cleaning and turn-out, and left again for another twenty-four hours, and it will be all right.

If you wish to have the bedding stoved, this will be done for you by the local sanitary authorities. Write to the Medical Officer of Health at the town hall, and it will be collected.

What Makes a Good Nurse?

A good nurse will always, when possible, consider the comfort of the patient. She should be clean in her person. A dirty nurse is unthinkable.

She should be healthy or she cannot do her work.

She should be cheerful and bright. A gloomy, sulky nurse does not encourage the patient, perhaps in pain already, to get better.

She should be quiet. Noise is disturbing.

She must be observant, or she will

not notice all the little things that the doctor will want to know. She must know what the patient wants before he has to ask for it.

She must be good tempered. It is hard work looking after a sick person, maybe for weeks together.

She should be economical. Sickness means bills, and money is not too plentiful nowadays.

She must be obedient, because she has to carry out exactly the orders given by the doctor, whether she understands why they are given or not.

When nursing, always make it a rule to get out every day, even if it is only for five minutes' walk. Fresh air is absolutely necessary if you are to keep well, especially if you are looking after someone with an infectious disease. It would not help anyone, would it, if you offered to look after a sick child and then fell ill yourself. Don't take your own meals in the sickroom.

Nursing a Child

The nursing of a sick child is in many ways more trying than the nursing of an adult. You cannot reason with a sick infant. He does know that he feels uncomfortable, but he does not know why he feels so. Often a child, especially if very young, is in pain. But he cannot say where the pain is or what it is like. Therefore the person looking after him has to watch long and carefully to find out what is troubling.

Of course, in some ways children are easy to nurse. They can almost always be wrapped in a blanket and gently lifted up so that the bed can be entirely remade. This is a great help. Then, when a child starts to recover, he does so more quickly than an adult.

Occasionally it may happen that a small operation is to be done at home. For this the room should be cleaned out, and well aired two days before it will be needed. A fire should be lit in the morning, so that the temperature can be raised to 70.

A firm table will be needed. A kitchen table will often be found the most suitable. It should be covered with a firm mattress. If there is not one that will fit, then fold two blankets and put them on top. Then a macintosh and, over all, a sheet tucked in.

There should be a small firm pillow.

The anæsthetist will need a chair and a small table, such as a card table, for his bottles. The surgeon will want another table on which he can stand the instruments.

Have a jug of water boiled the night before, and covered with a clean towel until wanted. A kettle of boiling water is necessary, a nail brush, soap, and six towels. A couple of small basins or pie dishes will complete all that you will be expected to provide.

As soon as the child is taken into the room, you should put a covered hot water bottle in his bed, and wrap a small blanket round it, so that there will be a warm one ready to put round him. Have a towel and small basin ready in case he should vomit after the anæsthetic.

An unconscious person should never be left alone. Stay by the bed until he has come round from the anæsthetic or else has gone to sleep.

Convalescence

After an acute illness comes the time of convalescence. This is often the most trying time of the whole illness. You have managed the nursing so far because you have had a feeling that you were doing your best for a sick person. Now you may be tired

and yet you have to go on with an apparently unreasonable, irritable person. The patient feels better and begins to take an interest in life again. But he does not realise how little strength he has yet, and as he tires easily, he gets cross.

It is at this time that a good nurse will display much ingenuity in keeping him amused and yet not tired. She will watch out for signs of weariness and will see that his occupation is changed or that a rest is suggested.

The day will slip by if it is carefully arranged. An early cup of tea, the morning wash, a rest, a look at the paper while the room is being done. Then perhaps a visitor for a short time at eleven, when refreshment is taken, and the doctor calls. A rest after mid-day dinner is essential.

Next there is the business of getting up, the convalescent wrapped in a dressing gown, and later on, fully dressed. Tea-time comes and then bed-time.

A good nurse will try to pick up bits of news that may interest her patient. If she can find out something to talk about in connection with his hobby, so much the better. Nowadays, the wireless is a great boon to sick people. But do not remind the patient in the morning that his favourite programme is on that evening, and then forget all about it. He will be disappointed, and in illness little things loom large. Another thing you must certainly never do: collect items of bad news and horrors and fling them at the convalescent. Be cheerful, but do not be fussy or melodramatic.

Physical Culture Simplified

THE average person has a wholesome dread of the kind of physical culture that requires one to rise at six, expose the body to the freezing air, inhale, do a number of intricate exercises, refrain from eating this and that and make life miserable in countless ways. This is so because the average person is endowed with a considerable amount of shrewd commonsense.

Generally speaking, physical culture is ruled by numerous sets of cranks, each with his own ideas as to what is best. One urges that vegetarianism is the only road to physical salvation, another declares for nudism, while a third advocates raw food, like the animals eat. In Austria there exists a cult which actually believes that men and women should walk about on all fours, otherwise in a few hundred years the whole world will be crippled. And the amazing part is that they are not merely content to practise their beliefs, but try to force them on other people.

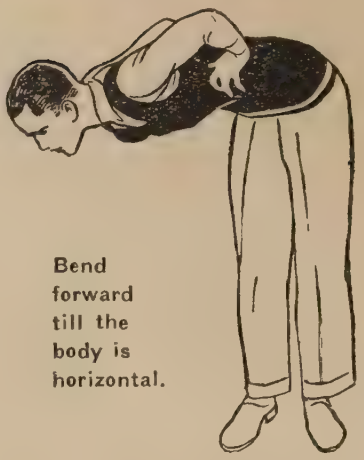
While the average person realises that such things as fresh air, sunshine and vegetables are excellent in reason, he is loth to place himself in the hands of cranks. He tries to gain as much benefit as he can from physical culture, but very often fails to do so, only because of his ignorance of a few essential matters.

Study Yourself

To get the best results, the average man (or woman) should study his own body. In minute details it differs from the physical make-up of any other person in the world and therefore requires individual treatment. He knows, better than the cleverest Harley Street specialist, exactly what suits him; experience has laid down certain rules which he finds it wisest to obey. Let us deal with a concrete example. Brown, for instance, eats pineapple and suffers severely from indigestion. If this occurs two or three times, he gets to know that pineapple does not agree with him, however much it may suit Robinson. Experience, then, has given him a key to health, and it is up to him to take advantage of his knowledge. Every man, they say, is either his own doctor by forty, or a fool.

If everyone had sufficient money,

lived exactly where he liked and did what he wanted, there is little doubt that most people would be healthy. But cooped as we are, in cities, and the servants of others for the greater portion of our lives, we are often too tired to follow our natural inclinations, or have insufficient money to put them into practice. This being so, a few general hints on how to keep fit at all times would not be out of place. But, it must be remembered that what applies to a young person will not automatically apply to those who are more mature or who have a more settled state of existence.



Bend forward till the body is horizontal.

Exercises For Youth

If fitness is the ultimate aim, young people, that is, men and women to the age of 30, can achieve their desire by playing games. Tennis, cricket, football, hockey and rowing are within the reach and purse of most people to-day. For those who do not care for such sports, cycling to and from work or on week ends will bring excellent results. No matter how poor or busy one is, it is possible to walk, and this form of progression, even along city streets will induce fitness. Swimming baths have been built in most of our cities, and in the water one can obtain as much exercise as anywhere.

If none of the above suits the individual, he can purchase apparatus and exercise in the privacy of his own home. If no apparatus is at hand, simple arm, trunk and leg exercises will answer the case equally well. The average young man needs little or no advice to enable him to keep fit; structurally he should be strong enough to stand any exercise, and he will have almost to exhaust himself before he is strained. Leave him to his own devices and he will work out his own salvation.

With the young woman, it is otherwise. Her organism is different. Sports such as boxing, wrestling and even races of half and quarter mile, are too strenuous for her. On no account should a young woman do anything that will bring her to the verge of nervous exhaustion. In her case, physical exercises, such as are laid down in the curriculum of most schools, are necessary to build up her body and enable her to stand the strain of games. Professor William G. Anderson, M.D., of Yale University, probably the greatest authority on games in the world, is of the opinion that tennis is the finest game for the young woman as well as the young man of sedentary occupation. It not only keeps one active, and the liver in good order, but brings about a considerable amount of co-ordination between mind and muscle which assists the average person in his daily work.

In Later Life

Now let us take the case of the man and woman of middle age, that is, from forty to sixty. It should not be till after sixty-five that age begins to tell, and really, a man should be at his peak from forty to fifty. Owing to improved conditions of living, people age far slower to-day than they did three decades ago.

If life is well ordered, middle age should be the fittest and happiest portion of life, but if not, it can be the most dangerous, for the middle-aged person cannot emulate the feats of younger people and remain fit and strong. There is a tendency for men as well as women to get fat, though women of all ages tend to fatten sooner than men. There is a logical reason for this. Physically, life has slowed up somewhat by this time. Most people are able to afford the luxuries which were denied them in youth; servants, cars, richer food. Eating and drinking has, if anything, increased with years, and exercise diminished. Fat accumulates, and is exceedingly hard to get rid of. During middle age, violent exercise very often proves fatal, unless a person has continued regularly from youth. Usually the muscles are soft, the wind is bad and one tends to get exhausted rapidly. There is no need, however, to fly to violent exercises and starvation diet. A few gentle, twisting movements, which all can do, will invariably prove beneficial.

Excellent For Everyone

Here is an exercise which has the effect of toning up the spine and incidentally the numerous nerves that radiate from it. At the same time it squeezes the liver, exercises the ribs and abdomen, and massages the interior of the stomach. It requires just a few seconds, and can be done at varying intervals throughout the day. Stand with the legs apart, not any set distance, but merely in a comfortable stance. Place the hands lightly on the hips. Bend forward till the body is horizontal. Now twist, from the hips, as far as possible to the right, then return. Twist as far as possible to the left and again recover. Then stand upright once more. Simple, yet efficient. If you like, do it two or three times, but in any case, do it about ten times altogether, throughout the day.

Sit upright with both hands grasping the arm of a chair.

That this exercise is good, even for the young, there is no doubt. R. M. N. Tisdall, the Olympic athlete and world's record-breaker, has it as his only exercise. He performs the exercise three times when he rises. Moreover it is not too strenuous for a man of eighty. It exercises just the essential organs which must be kept in good order for our well-being

A very similar and hardly less effective exercise may be practised in the office, many times a day, if necessary. Sit upright with both hands grasping the arms of the chair. Brace the feet against the legs of the chair and try to turn the body to its limit in either direction. The effect on the shoulder blades and spine will be more severe than in the first case, but the stomach will not receive much benefit.

Stretching Exercises

Those who dread getting fat, and there are thousands of them, should occasionally do a few stretching exercises; not the usual ones given in books that must be done at certain specified times. This is an exercise that has assisted many people to regain their lost vigour. When you have got into bed at night, lie on your stomach. Bend the legs from the knees and stretching the hands backwards, grasp the ankles. Now pull with the arms, at the same time attempting to resist with the legs. This has a tendency to draw the head and neck up, curve the spine, brace the lumbar muscles, the muscles of the arms and those of the thighs. Pull and relax. Do this till you think it has had some effect. It will vary with individuals. Some can do it two or three times, others only once. It can be done vigorously if a great deal of exercise is required or gently, just as one likes.

Grasp the mantelpiece for support, raise the leg over the top of a chair.

Rubbing the body is in itself a fine form of exercise as well as a fine fat reducer. Moreover, it helps to stimulate and soften the skin and keeps the pores open. If one is fat in any particular spot, just rub away as hard as possible, and a certain amount of reduction will follow. It cannot harm you. Never use patent rollers. The palm is best.

The bugbear of most middle-aged women, and many young ones, too, is fat hips. No matter what they do, adipose tissue tends to pad them. Rubbing will help, but other exercises are needed if the fat is to be removed. Such women should stand before the fireplace, and have a chair, with its back to them about two feet behind. Grasping the mantelpiece for support, one leg should be raised, passed over the top of the back of the chair and then lowered. It should then be passed over the chair in the reverse direction and the exercise should be repeated three or more times. This will tire the muscles of the thighs and hips. The other leg should be exercised similarly and an improvement will soon be noticed in the condition of the hips.

It is not at all necessary to do the exercises outlined every day or morning and evening as if part of a religion. A day or so may be missed without detriment, but when they are done, they must be performed properly and till the person is tired. Perhaps just one more exercise should be given for the hips, thighs and waist generally. It is extremely simple, and perhaps the best of the lot. Stand before an armed chair. Place the legs apart and bending down, grasp the arms firmly. Raise the left leg, and pass it in front of, across and as far as it will go, to the right of the right leg. Then return it to the first position. Do likewise with the right leg, that is, place it as far as possible, by crossing, to the left of the left leg. Do this about half a dozen times, which will prove enough for most people.

But, whatever one does, it is wrong to become a martyr to exercise. The moment exercise becomes like work, half the benefit it should give, is lost. It should always be pleasant, otherwise movements will be done in a slipshod manner, which is merely a waste of time.

Relaxation and Rest

But almost as important in the scheme of things, is relaxation. They say that a person who has the art of relaxing at will, also possesses the secret of health, and to a great extent this is true. While this applies to men and women of all ages, it is most important to the middle-aged, or to those who are approaching middle age. The old feel the need for rest, but the middle-aged think that something is wrong with them when they feel they prefer to rest rather than engage in some strenuous pursuit. The feeling that rest is needed is merely Nature's voice and should be obeyed. Every middle-aged person, whether a manual or sedentary worker, should sit back and close the eyes just for five minutes

Grasp the arms firmly. Pass your right leg to the left of your left leg.

after lunch. This takes the mind off work, gives the brain a rest, and enables one to start in fresh and full of energy. Middle-aged people should never engage in very strenuous work immediately after a meal. At least half an hour should elapse.

Holidays and change of any sort are forms of relaxation that are extremely valuable. Monotony always kills. If it does not entirely destroy the body, it has a disintegrating effect upon the soul. Any sort of a change, it is said, is better than no change at all.

From a purely physical point of view, everyone in the country should

sing. Singing is a form of breathing exercise, and a very pleasant one, indeed. Take any well-known singer; he possesses a fine chest and neck. He is almost always in good health. Singing and happiness go hand in hand, and happiness and health are inseparable. That is one reason why the advent of mechanical music is to be deplored. Perhaps it is making us listen to a few good singers instead of making a nation of songbirds, mayhap inferior ones.

Take up any periodical. It is almost sure to have an article dealing with the beneficial effects of dancing. This is absolutely true. Dancing, being rhythmical, is good for the mental and physical well-being. It takes the mind off other and more serious things, and is an exercise and a form of relaxation at the same time. It can be adapted to suit the young, the middle-aged and the old. No one, except very old people, is too old to dance. There are people who would have us believe that dancing is the end all and be all of life. Like the majority of physical culturists, they are merely cranks. Listen to them, by all means, but draw your own conclusions.

For the Child

The only people who have not been included in this article are young children. The child from 12 to 15 requires no exercise. It is just burning to get rid of as much energy as it can. Those below the age of 12 should on no account be allowed to play organised games with other and older children, for from seven to 12 a child is liable to strain its organs and perhaps handicap itself throughout life. Such sports as tree climbing, rambling in the country or parks is best suited to their tender limbs and muscles.

The term "physical culture" is a misleading one. It is impossible to isolate the body from the mind, for the well-being of one has a corresponding effect upon the other. Thus, one cannot maintain perfect health if worried or afraid for long periods. Worry affects the muscles of the stomach in such a way that it is impossible to digest food. This results in internal trouble and very often nervous complaints.

Broadly speaking, physical culture is the secret of living and getting the best out of life. The Greeks, from whom we get a considerable amount of inspiration even to-day, were adepts at the art. They mixed pleasure and work to a nicety. The chief ingredient for successful living is common-sense. Those who declaim loudly the praises of physical culture have merely made a science of the art of living. As long as their teachings are in accordance with reason, one could do worse than listen to them. But the moment they associate themselves with some "ism," they become faddists and cannot claim a rational hearing.

Drink when you are thirsty; eat when you are hungry. Let your tastes be guided by genuine desires. The body involuntarily calls out for what it most needs; be guided by its signals. Use reason, of course, and you will seldom be ill. If you are, it can usually be traced to some piece of folly on your part. This article has not divulged the secret of enormous muscles or vast strength and endurance, but it has shown how a sound mind may be maintained in a healthy body at all times.

Invalid Cookery

THESE SIMPLE RECIPES WILL BE VERY HELPFUL

THE skill of the cleverest doctor in the world will be useless, unless the patient can obtain nourishing, well-cooked and well-served food. Many a person has been brought safely through the crisis of an illness, only to have his recovery retarded, or prevented altogether, by injudicious feeding.

In the acute stages of severe illness very little nourishment can be taken, and this only of the simplest kind, requiring little or no cooking. It is when the crisis is passed, and the patient's returning strength requires careful building up, that food becomes more important than doctor's medicine. The appetite is uncertain, sometimes clamorous, at other times entirely lacking; often fickle and unnaturally ravenous. It is a critical time for the patient, and requires all the skill and tact and inventiveness of the cook and nurse if his recovery is to be certain.

Rules To Bear In Mind

Give small quantities at frequent intervals. A tablespoonful every half-hour will perhaps be more easily assimilated than two tablespoonfuls every hour. Always have something tempting ready for a patient after a sleep.

Let an invalid's food be a surprise as far as is possible, and never let the odours of cooking penetrate the sick-room.

Never leave stale food in the sick-room. It quickly deteriorates in the atmosphere, and the sight of it takes away the patient's appetite. Fresh fruit, attractively arranged, may be kept in the patient's sight, but not for too long. If he is not tempted to eat it, remove it to a cool place and re-serve later. Some invalids find the smell of fruit overpowering.

Never serve twice-cooked meats or fish to an invalid. Twice cooking means over-cooking, and all food for invalids should be cooked as lightly as possible in order to preserve the natural juices and goodness.

Punctuality is most important. When the doctor orders certain food to be given at a certain time, nothing must be allowed to prevent it being served then. Minutes make all the difference between quick and slow recovery—in fact, they may mean life itself.

Scrupulous cleanliness in every detail of cooking and serving is absolutely

necessary. Saucepans and other vessels in which food is cooked, as well as the glass, silver, and serving dishes, must be clean and free from taint of any kind. Invalid food is of such delicate flavour that it is quickly destroyed if unclean utensils are used. It is safest to keep a set of cooking vessels for the sole use of the invalid.

Never use alcoholic beverages in invalid cooking without the doctor's consent.

Condiments and seasonings should be very carefully used, and the doctor's advice should be taken about such things as pepper, cayenne, Worcester or other piquant sauces, vinegar, flavouring essences, etc. In some illnesses these are an aid to digestion; in some digestive disorders, they have to be avoided altogether. This must be borne in mind when consulting the recipes given below, in which these ingredients may be mentioned.

Salted and preserved meats and fish, high game, tinned fish, oily fish, are not permissible. Oysters are the only shellfish that should be given to invalids. Kidneys, hearts and such internal organs of close texture should not be given; liver is given only as a special diet under doctor's instructions; tripe is good and so is the flesh of cow-heel used in soups and jellies. Sweetbreads are very suitable. Mutton, though less nourishing than beef, is more easily digested. Pork and veal are too difficult to digest.

BEEF TEAS, BROTHS, SOUPS, FOR INVALIDS

Clear Beef Tea

1 *lb. gravy beef (shin).*
1 *pint cold water.*
¼ *teaspoonful salt.*

Wash the meat under running water and dry well. Cut in slices, and scrape each slice with a sharp knife. Lay each piece as it is scraped in the pint of water with the salt, and let it stand for an hour or longer. Put meat and water in earthen jar. Tie a piece of thick paper over the top, then put on lid, or small saucer. Place jar in pan of boiling water over a very low gas jet, and let it simmer gently three to four hours, stirring occasionally. When cooked, strain out the meat, pressing it gently. Remove every trace of grease with kitchen paper drawn carefully over the top of liquor. Season carefully with salt and pepper if latter is allowed. Serve in small quantities. The jar may be placed in a slow oven instead of in pan of water.

Thick Beef Tea

1 *lb. lean gravy beef.*
¼ *lb. ox kidney.*
1 *pint cold water.*
½ *teaspoonful salt.*

Wash beef, dry it, trim off any fat, and scrape into ragged shreds. Skin kidney, remove core and fat, then chop finely. Let meat and kidney soak in the water and salt for three-quarters of an hour. Turn all into a saucepan, heat slowly, turning and pressing meat constantly until it becomes a deep reddish brown. Strain out meat, press in a mortar, then rub through a fine sieve. To this paste gradually add the liquor, stirring well until smooth, and season it carefully.

This is very nourishing and digestible, but it should not be given to an invalid when solid food is forbidden.

Raw Beef Tea

½ *lb. very fresh, lean steak.*
½ *pint cold water.*
½ *teaspoonful salt.*

Wash and wipe meat and trim off all fat. Scrape into shreds with sharp

knife, and lay in a shallow dish with the water and salt. Cover and let it stand twelve to twenty-four hours. Press the meat frequently. When the meat is quite pale and the water a deep red, strain through muslin and squeeze out all the juice. Serve in a coloured glass.

This beef tea will only keep a short time, so it is useless to make a lot at a time. As it is very highly concentrated, only a few teaspoonfuls are given at a time. It is very useful in cases of extreme exhaustion.

Jellied Beef Tea

1 lb. lean raw beef.
1 calf's foot or cowheel.
1 quart cold water.
½ teaspoonful salt.

Wash meat and foot and dry well. Scrape meat into fine shreds. Lay it as it is scraped in the water with the salt, and let it stand for half-an-hour.

Chop the foot or cowheel into small pieces, and put it with the meat, and the water, into an earthenware jar. Tie paper over securely. Place jar in a saucepan of boiling water on the fire. Let the water simmer round the jar, seven to eight hours. Add more water as it boils away in the pan. Strain the liquid off, season it with salt and pepper, if allowed, and set it aside till cold. Remove any grease that may rise to the top.

Note that jellies for invalids should never set in a thick solid mass. The liquid is merely jellified. This jelly is particularly strengthening and may be heated if liked.

Beef Tea With Egg

1 gill strong beef tea.
1 perfectly fresh egg.
Salt and pepper.

Beat the egg to a froth. Heat the beef tea but do not let it boil. Add the egg slowly, whisking gently all the time. Season and serve in a hot cup.

Sometimes invalids are ordered white of egg only, in cases where albumen is needed in the diet, and the yoke is found to be indigestible. If this is necessary, separate the egg yoke from the white and use as described above.

Chicken Broth

Half an uncooked chicken, including giblets.
½ a small chopped onion.
Dessertspoonful of rice.
Teaspoonful of chopped parsley.
1 quart of cold water.
Salt and pepper.

Remove meat from bones, in small pieces, chop the bones, clean giblets thoroughly. Put all into saucepan, with onion, water, and a little salt, and simmer gently for three hours. Remove any scum. Wash rice, and three-quarters of an hour before broth is finished, sprinkle it in and finish cooking. Strain off the broth, remove every scrap of skin and bone, and cut meat into small neat dice, put it back into the broth. Add the parsley, and salt and pepper to taste. If rice is allowed, the cooked rice may also be added, after straining.

Fish Soup For Invalids

One pound of raw white fish, such as whiting, sole or plaice.
1 quart white stock, or milk and water.
Piece of onion and celery.
½ a carrot.
Yolks of two raw eggs.
½ gill milk.
¼ lemon.
1 ounce butter.
½ ounce of flour.
Teaspoonful chopped parsley. A bunch of herbs and a small blade of mace.

Wash fish and cut into small pieces. Put in a saucepan with stock, vegetables, herbs, and mace, and simmer

gently for twenty minutes. Strain off the liquid. Melt butter in a pan, stir in flour smoothly, then add the fish liquor, and stir till boiling. Remove from heat, and leave to cool slightly. Beat up egg yolks, stir in the milk, and when the soup is cooled, strain these in. Reheat the soup, but do not allow to boil, lest the eggs curdle. Season delicately, adding a few drops of lemon juice, and chopped parsley.

Mutton Broth

One pound of lean mutton.
Dessertspoonful of pearl barley.
2 teaspoonfuls of chopped parsley.
½ a small chopped onion.
1½ pints cold water.
Salt and pepper.

Wash the meat, dry it, remove skin and fat. Cut into small dice. Put in a saucepan with water, and half a teaspoonful of salt. Bring slowly to boiling point, skim, and add the onion. Wash pearl barley in boiling water, and add it to the rest. Let all simmer gently for three hours, skimming frequently. Strain off the liquid, remove any grease, add the parsley and salt and pepper to taste. Serve hot or cold. If solid food is allowed, a little meat and barley may be left in.

Oyster Broth

Half a dozen oysters.
½ gill white stock, or milk.
Gill of cream.
Salt and pepper.

Beard the oysters, and cut into medium-sized pieces. Put into a pan with their liquor, add the cream and stock, and bring to boiling point. Let them just simmer, not more than two minutes. Longer cooking will toughen the oysters. Season well, and serve with brown bread, or thin toast.

REFRESHING AND NOURISHING DRINKS, GRUELS, ETC.

Clear Barley Water

Two large tablespoonfuls of best pearl barley.
Rind of a lemon, and juice of half a lemon.
Four or five lumps of sugar.
1 pint boiling water.

Put barley in a saucepan, with cold water to cover, bring to the boil, and throw water away. Put the barley in a jug or basin, with the thin rind of the lemon, and the sugar. Pour on the boiling water, and cover the jug securely. Leave till cold, then strain off the liquid, and add the strained juice of half a lemon.

Thick Barley Water

The same quantities of ingredients as for clear barley water. After scalding the barley as above, put it in a saucepan with the boiling water. Boil gently, until the consistency of thin cream. Strain the liquid, sweeten to taste, and add the lemon juice.

Barley water quickly goes sour, so do *not* make large quantities at a time.

Gruel

Dessertspoonful of the finest oatmeal.
½ pint boiling milk.
Sugar or salt to taste.

Mix the oatmeal to a smooth paste with a little cold milk. Pour on the boiling milk, stirring all the time, put into a saucepan, and cook it gently ten minutes, stirring frequently. Strain and add salt, or sugar, to taste. Serve very hot.

Egg Nog

One new laid egg
½ pint milk.
2 lumps sugar.
2 teaspoonfuls best brandy.

Put the milk in a jug, and stand in a pan of boiling water. Let water boil, until milk is very hot. Put sugar into milk and leave it to go cold. Beat up the egg yolk, and whisk the white to a light froth. Add the cold milk and brandy to the yolk, strain these, and mix in the egg white thoroughly, and serve.

Egg Flip

One new laid egg.
Dessertspoonful sugar.
½ pint of sherry or brandy.

Beat the egg yolk lightly, add the sugar and beat until creamy, then add the wine. Whip the white stiffly, fold in lightly, and serve at once in a tumbler.

Albumen Water

White of one new laid egg.
12 tablespoonfuls of COLD *boiled water.*

Break up the egg white lightly with a fork; put it into a medicine bottle, with the water, and shake until thoroughly mixed. This is tasteless and only one or two teaspoonfuls should be given at a time, but it is very valuable, being albumen in its most digestive form.

White Wine Whey

One gill new milk.
Wineglassful of sherry.
Fine sugar to taste.

Bring milk slowly to boiling point, and pour in the sherry. Curds will form immediately. Strain through a piece of muslin, and serve the liquid hot or cold, sweetening to taste.

Orangeade

Four juicy oranges.
½ pint boiling water.
Sugar to taste.
Soda water.

Wipe the oranges, pare off rinds thinly, and put them in a jug with about ten lumps of sugar and the boiling water, and the strained juice of the oranges. Cover and leave till cold. When required put about a quarter of the quantity into a glass and fill up with soda water.

Let an invalid's food be a surprise as far as possible.

Linseed Tea

One teaspoonful of whole linseed.
1 pint water.
Rind and juice of half a lemon.
An inch of liquorice.
Three or four lumps of sugar.

Simmer all the ingredicints twenty minutes, strain, and serve hot or cold.

SOME INVALID FISH DISHES

Fish Moulds

Half pound cooked white fish.
Tablespoonful white bread-crumbs.
1 egg.
½ ounce butter.
½ cup of milk.

Gill of parsley sauce.
1 teaspoonful chopped parsley.
Salt and pepper.

Remove skin and bone from fish and pound it well with the crumbs, parsley, warm butter, beaten egg, milk and seasoning. Butter some small moulds, and half fill them with the mixture. Put them in steamer, with boiling water to come half-way up the moulds. Lay a sheet of paper over the top of the moulds. Simmer gently half an hour, or until the mixture feels firm when pressed, and leaves the sides of the moulds. Turn out carefully, and pour the hot parsley sauce over them.

Steamed Fish

One filleted sole, plaice, or whiting.
1 teaspoonful lemon juice.
½ ounce butter.
Few browned crumbs.
Salt and pepper.

Coil each fillet round the finger, skin side inside. Butter a soup plate, stand the fish in it, sprinkle with lemon juice, a few browned crumbs, and salt and pepper. Cover with a piece of buttered paper, and then with another soup plate. Stand the plate over a saucepan of boiling water, and let the water boil steadily, until the fish looks clear, and can be easily pierced with a fork. Serve on a hot dish, with the liquor from the fish poured round, and a few dabs of butter on the fish. Garnish with cut lemon.

Fish Custards

Tablespoonful of any cooked white fish, chopped small.
½ pint milk.
1 egg, and an extra yolk.
Salt and pepper.

Beat eggs lightly, stir into them the fish, dash of salt and pepper, then the milk. Well butter some moulds, pour in the mixture, and put them in a pan, with boiling water coming half-way up them. A buttered paper on top, and steam twenty minutes. Turn on to a hot dish and serve at once, with thin bread and butter.

INVALID MEAT AND POULTRY DISHES

Raw Beef Sandwiches

Two ounces best fillet steak.
Salt and pepper (and a dash of mustard, if allowed).
Thin slices of brown or white bread and butter.

Wash and dry meat, and shred finely. Pound it, or rub it through a sieve. Season the meat well with salt and pepper, and made mustard. Spread a slice of bread and butter with some of this mixture, cover it with another slice, and cut into small dainty shapes. Finely chopped parsley may be added, if allowed, and fine castor sugar is often used instead of salt and pepper, to disguise the flavour. These sandwiches are very nourishing and digestible, and not at all unpalatable.

Raw Beef Balls

Four ounces fresh fillet steak.
1 teaspoonful cherry brandy.
Small nut of butter.
¼ teaspoonful salt or sugar.

Prepare and pound the beef as for the sandwiches. Mix with the brandy and the sugar or salt. Roll the mixture into balls the size of a marble. Melt a little butter in a frying-pan, and when smoking hot, lay in the balls, and roll them about in the pan, until the heat changes the colour to a pale brown. Serve at once with a little good soup. The balls must not be cooked; the slight heating is only done to make the raw colour less noticeable.

Stewed Tripe

Half pound best honeycomb tripe.
Half a Spanish onion cut into thin slices.
½ pint milk.
Dessertspoonful flour.
1 clove.
Salt and pepper.

Wash tripe, put in a pan with cold water to cover, and a little salt. Boil for five minutes. Take it out and remove all fat. Cut the tripe into neat pieces. Put the slices of onion into enough cold water to cover them, boil for five minutes, drain off water, and chop them finely. Put tripe, milk, clove, and onion in a stewpan, with a little salt. Cover the pan, and let all simmer gently for two hours, or until quite tender. Mix the flour smoothly to a thin paste, with a little cold milk. Add this to the tripe, and stir until it boils up again. Remove the clove, and serve the tripe in a hot dish, with sippets of toast around.

Stewed Chicken

Half a young chicken.
1 gill of milk.
1 gill of water.
½ teaspoonful chopped onion.
Stick of chopped celery.
Tablespoonful cream.
Dessertspoonful of flour.
Salt and pepper.

Cut chicken into neat joints. Remove outer skin. Put into stewing-pan with water, milk, onion, celery, and a little salt. Let these stew gently for one and a half hours, keeping well covered. Mix flour smoothly with a little cold milk, and add to the chicken. Boil up again, and stir, and cook for five minutes longer. Season carefully, and add the cream. Arrange the chicken on a hot dish, and strain the sauce over.

Steamed Breast of Chicken

Two or three slices from the breast of a raw fowl.
½ ounce fresh butter.
1 tablespoonful minced, cooked spinach.
Salt and pepper.

Remove the skin from the chicken, butter plate, lay on the chicken, sprinkle with salt and pepper, and cover with another plate. Place over a pan of boiling water. Let the water boil quickly for forty minutes. Test the chicken with a fork; if tender, it is cooked enough; if not, steam a little longer. Serve on a hot plate, and pour round any juices extracted during cooking. Arrange the spinach in a neat pile on the plate, and serve very hot.

Neck of mutton or lamb chops can be steamed in the same way, and are very nutritious.

Stewed Sweetbreads

One calf's heart sweetbread.
1 pint milk, or white stock.
Small carrot and onion.
2 teaspoonfuls chopped parsley
A sprig of parsley and thyme.
2 teaspoonfuls cornflour.
A little lemon juice.
Salt and pepper.

Put sweetbread in a saucepan with cold water to cover and a little salt. Boil up, and let it simmer for five minutes. Lift out and put in a basin of cold water. Trim off skin and gristly parts. Put sweetbread in a stewjar with milk or stock. Add the clean vegetables and herbs, and simmer very gently for three-quarters to one hour. Place it on a hot dish. Mix the cornflour smoothly with a little cold milk, and strain on to it the milk or stock in which the sweetbread was cooked. Pour back into a saucepan, and stir until it boils, and simmer for five minutes. Add the chopped parsley, lemon juice, salt and pepper to taste. Pour some of this sauce over the sweetbread, and serve the rest separately.

JELLIES AND PUDDINGS FOR INVALIDS

Milk Jelly

Half pint of milk.
½ ounce powdered gelatine.
1 teaspoonful of sugar.
Lemon juice or flavouring.

Dissolve the gelatine in two tablespoonfuls of boiling water. Warm the milk slightly to dissolve the sugar. Add the milk, sugar and flavouring to the gelatine, stir well, pour into a wet mould and leave to set.

Egg Jelly

One egg.
2 ounces sugar.
Not quite ½ ounce gelatine.
1 lemon, rind and juice.
½ pint water.

Put water, sugar, gelatine, lemon rind and juice, on to boil, and simmer for ten minutes. Beat the egg, and when the rest of the ingredients have cooled a little, strain them on to the egg. Pour into a mould, and leave to set.

Junket

One pint of milk.
1 teaspoonful rennet, or one rennet tablet.

Heat milk to blood heat, stir in the rennet, pour into a glass dish and leave until quite cold. Sprinkle with grated nutmeg, and serve with sugar and cream.

Trifle For An Invalid

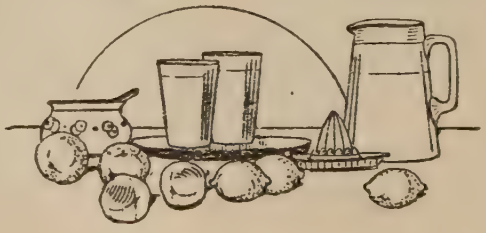
Two penny sponge cakes.
A little red currant jelly.
1 whole egg, and one extra yolk.
1 glass sherry.
1 gill milk.
½ gill cream.
Castor sugar to taste.

Halve the cakes lengthwise, spread with jelly, put the pieces together, and cut them lengthwise so that there are four long pieces. Arrange in a glass dish and pour sherry over. Beat up the egg and yolk. Boil milk. Let it cool slightly, then pour it over the eggs stirring all the time. Put this custard into a jug, place in a pan of boiling water, and let the water simmer gently until the custard thickens slightly. Stir often. Sweeten to taste, and when cold pour over the cakes. Whip the cream stiffly, and spread it over the custard.

Steamed Custards

One gill milk.
1 whole egg, and one extra yolk.
1 teaspoonful castor sugar.
Flavouring.

Beat the eggs lightly. Boil the milk, and when it has cooled slightly, pour it on to the eggs. Add the sugar, and a few drops of flavouring essence. Well butter small cups or moulds. Strain in the custard, and twist a piece of buttered paper over the tops of the moulds. Steam the custards very slowly until they are firm. The water in the pan must on no account gallop. When cooked, let the custards stand for a minute or two, ease them from the sides of the moulds with the finger tips, and turn out carefully. Serve plain, or with stewed fruit, or jam.



How to Swim

THERE is no finer or more enjoyable exercise in the world than swimming. More and more people are coming to realise this, and the man or woman who does not swim, or at least bathe, will be quite a rarity in the near future.

Learning to swim is a fairly easy matter, if you set about things properly, with a clear knowledge of what has to be done. In many respects it is an advantage to learn as a child, but there are equally many ways in which the adult beginner scores—superior buoyancy, more definite aims, better understanding of requirements, more thorough application to study—these are generally some of them.

Whether you begin to swim in the sea, fresh-water bathing-place, outdoor or indoor bath, does not greatly matter, the same broad principles apply equally to all.

First, for example, is confidence. Baden-Powell once said there were six things required to make a swimmer, confidence was the first, and the other five were—more confidence.

Don't assume, though, that because you feel instinctively nervous when you get near the water, therefore things are going to be unusually difficult for you. The necessary confidence scarcely ever does belong to the swimming learner; it has to be acquired, and the most nervous person can soon acquire it. This necessary confidence is really little more than "feeling at home in the water"—so that must be your earliest aim.

It is always particularly inspiring to begin your swimming career on a warm, sunny day; but you will often find that the water itself seems warmer when the weather is grey and even chilly. When you take your dip doesn't matter, providing at least two hours have elapsed since your last meal.

Stretch your arms in front of you, with palms facing downward and outward.

Go Straight Under

Having donned your costume, a cheerful-coloured one for preference, don't waste time, but get straight in. The longer you hesitate the colder the water will seem, but a gay dash will rob it of all imaginary terrors—and once you are immersed, you will be able to laugh happily at any hesitancy you may have felt. Just how you get in will depend on where you are bathing.

At an artificial bath, you may first sit on the edge, then drop down into waist-deep water, holding the rail at the bath-side; in river or lake bathing-place you may scramble down steps, and so get in quickly; on the seaside beach it is best to dash out through the shallows, and splash right under when a depth of two or three feet is reached. This going straight under is of first importance, wherever you are. By ducking immediately you equalise your body temperature, so that the water feels comfortable at once.

Your next step should be to develop confidence by discovering something of the buoyancy of your body. You may grip rail or step, or a friend's hand; or lie face downwards in the shallows, with hands on the bottom, and try bobbing up and down, letting your head and shoulders sink right beneath the surface each time. Notice how pleasantly buoyant you are, and how reluctant the water seems to let you get down.

Or stand breast-deep, and stoop forward in an attempt to touch your toes—again you will find the water to resist your attempt to get down. All this is most pleasant knowledge, for it means that the water is not waiting to engulf you, as so many learners believe, but will do its utmost to keep you up, given a fair chance.

Notice that this "fair chance" depends a lot on whether all your limbs are immersed. If, for instance, you raise your hands above your head, in breast-deep water, it will be fairly easy to sit down on your heels; but if you go down gently, with both arms spread just under the surface, then you will be almost too buoyant to get down. So, in your swimming, remember to keep well in the water.

Jumping, romping, splashing, all such things can augment this preliminary practice, in helping to make you feel at ease in the water; but then, after perhaps five or ten minutes, you should tackle the second stage of your learning.

The Importance of Correct Breathing

There is no more common cause of failure in swimming learners than

inability to breathe in correct fashion. The swimmer does not take in breath through his nose, but through his *mouth*. There are obvious advantages in this aquatic respiration; a supply of air can be taken in much more quickly. This may be a big advantage if the face is only momentarily above the surface; there is no inconvenience if a little surface water chances to get taken in with the air—water taken in this fashion up the nose causes pain and choking in the delicate nasal membranes, but taken similarly into the mouth it is scarcely felt and need not even reach the throat. Air is exhaled through the nose, and this breathing-out can be performed under the water with perfect ease, so that it does not matter if the face happens to be submerged.

For these three reasons, therefore, you should set about aquatic respiration at once. Here is the best way to practise it, in the form of a little drill:

Stand upright in breast-deep water to begin, with arms raised above the head—this will make it easier for you to get down.

One.—Do a deep-knee bend, so that your head descends below the surface, and when you are submerged, empty the lungs by expelling your breath in a steady stream through the nose.

Two.—Rise, by straightening your legs, and take in a fresh supply of air at one big gulp through the mouth.

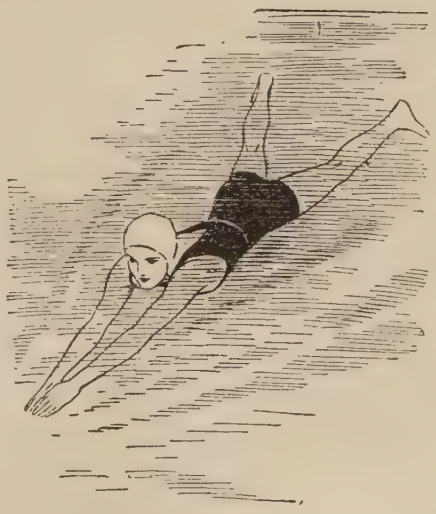
The timing of your breathing must be natural and unstrained, and you must persevere until you feel quite at ease. Ease will not come during your first bathe, but you may put in a little practice in a bowl of water at home if you have an opportunity.

Getting to Your Feet

A third, and final stage before you are ready to begin actual swimming—it is necessary, particularly if you are of the sex which makes the most graceful swimmers, that you shall know how to get to your feet in the water, whenever you want to. Learners often get into real trouble for lack of this elementary knowledge—as when they are flurried through swallowing a little water, and so want to stand up.

The method of getting to your feet is roughly the same whatever your position—you must draw your legs underneath you; strike out against the water with your hands; plant your feet on the bottom; raise your head, and stand up.

Try this, after pushing yourself into a face-floating position, with the body straight along the surface, in about a yard of water. Then try it from a back-float stretch, having



At this midpoint in the kick the body has the form of a letter Y.

similarly pushed off with your feet from the bottom until your body is out straight. Afterwards try getting up from all sorts of tumbles.

That is the end of the preliminaries; but be quite sure that they are thoroughly mastered. You may go through them all at a single bathe, and it is advisable to continue the practice of them over several days, when you first enter the water. Aquatic respiration should even be continued for many weeks, for so much of your future swimming will be largely dependent on its complete mastery.

And now for swimming!

Learning the Strokes

What stroke do you propose to learn first? There are four possible ways of beginning—breast-stroke, crawl-stroke, dog-paddle, back-stroke. If you have some special knowledge of one of these, or have a friend willing and qualified to teach one of them, then you will probably do best to begin with that. In due course you will master the lot, anyhow. But I will assume that breast-stroke is known to you at least a little; it may be that you have a vague idea of it through seeing it used. Even if you haven't, it is still very suitable for any adult learner, for it is so easy to understand and so conveniently practised.

You may even get a fair knowledge of the requisite movements by means of land drill, and this is an excellent plan, for having acquired the movements at home, the task of performing them in the water will be much simplified. Let me describe this drill: it has two distinct parts, the movements of the arms, and of the legs; and there is the right method of breathing, too. We will begin with the arm-action.

Stand upright, with arms stretched out to the front, parallel with each other and with the ground, and with the palms facing outward and downward. The action consists of four parts, and it is advisable to count aloud at first.

One. No movement is made, the arms remaining in the *preliminary position* already described.

Two. The arms sweep round, with a very slight downward slant, until they are almost in line with the shoulders.

Three. The elbows droop to the sides of the body, and the hands draw up beneath the chin, pointing forwards and with thumbs touching.

Four. Arms slide forward to full extension, and so reach their original position.

Leg Practice

It is only possible to practise one leg at a time, but the movement can be acquired by each in turn. Stand upright as before, and work the right leg first. The *preliminary position* is with feet together and both legs straight.

One.—Make no movement.

Two.—Still make no movement.

Three.—Draw up the right leg until its heel touches the left knee; the right knee must be held out to the side.

Four.—Kick out the foot sideways until the leg is straight; then, without pause, sweep it down until the *preliminary position* is reached.

Those parts of the drill in which "no movement is made" are where,

in actual swimming, the body is gliding from the force of a stroke or kick. Having learned the limb movements separately, you may combine both arms with one leg—or all four limbs together if you care to lie across a chair. The *preliminary position* is with legs together and arms stretched to the front.

One.—No movement is made.

Two.—Arms sweep round; legs remain still.

Three.—Arms draw up; legs draw up.

Four.—Arms slide forward; legs kick, and close together.

There is just one further part of the stroke—the fitting in of breathing. Obviously, the time when the swimmer should take in breath is when his head is well supported so that his mouth is safely clear of the surface; whether the mouth and nose get immersed after that does not greatly matter, for he can exhale beneath the surface. Naturally beginners have trouble in keeping the head up, and so it is particularly important that they should breathe at exactly the right time. The moment to take in breath is when the arms are making their stroke, for this lifts and supports the head.

Full-Stroke Drill

Exhalation therefore precedes this movement. You may try this breathing combined with the arm action alone. Here it is fitted with the full-stroke drill:

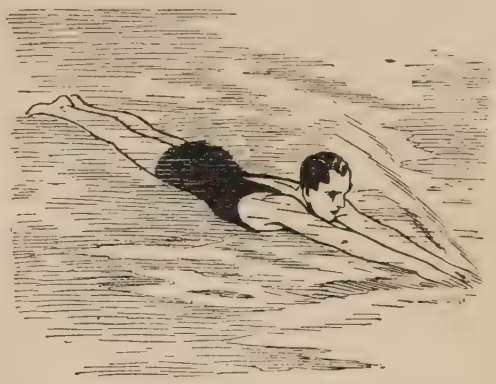
One.—Arms still; legs still; breathe out through the nose.

Two.—Arms pull round; legs still; breathe in through mouth.

Three.—Arms draw up; legs draw up.

Four.—Arms go forward; kick is made; breathing-out begins.

At first reading, all this drill may seem rather complicated, but by the time you have worked through it once or twice it will be straightforward enough, and after reasonable practice, you will be ready to try it in the water.



Glide as far as possible after the kick.

It is helpful to be similarly systematic in your early trials; leaning forward in breast-deep water and practising the arms by themselves; then clinging to step, rail, or bank, and trying the legs alone. Then will come the exciting moment when you try the full stroke. It is often taken for granted that weeks must elapse before the learner swims his first few yards; but providing the preparation has been on the lines I have indicated, there is every probability that the delightful experience may be yours almost at once.

Remember all the lessons of confidence you have learned; determine

not to get flustered but to perform the movements with the same deliberation and care as in the land drill; and start off with cheerful abandon.

Face the Shallow

Water up to your waist is most suitable for a start, and you should be facing towards the shallow, not the deep, so that your first few strokes will carry you where you can stand up comfortably. Lean forward until your shoulders are immersed; stretch your arms in front of you, with palms facing downward and outward; then push off from the feet.

This push will set you gliding along the surface, and your legs will straighten as your feet leave the bottom, and so trail along behind you —you will be exactly in the *preliminary position* of the stroke. Without waiting, once you are launched on this glide, sweep the arms round until they are almost in line with the shoulders, making them descend about three inches during this sweep. At the same time gulp in air through the mouth. Then draw up arms and legs, and immediately make the kick, and push the arms forward once more, beginning to breathe out as you do so.

The drawing-up movement is rather quick, but the kick is big and deliberate, though made with utmost force. It is of great importance that the legs shall open as wide as possible —at this mid-point in the kick the body has the form of a letter Y, with the trunk for the stem and the widespread legs for the branches. No pause is made at this point, however, for the straight legs sweep in together with tremendous vigour. Take care that the ensuing drawing-up does not begin before the legs, still straight, have come properly together.

Relax the Muscles

If your first one or two attempts fail to keep you up, it will probably be because your movements are too stiff and machine-like, instead of being welded into an harmonious whole. It is important to remember that a limp muscle is much more buoyant than a tense one, and you must therefore see that your body is relaxed as much as possible throughout the entire stroke—though this must not mean that the propelling sweep of the arms and kick of the legs must be any the less complete and vigorous. Many breast-stroke learners are troubled by the sinking of the head between pulls.

If aquatic respiration, with its under-water exhalation, has been adequately mastered, this sinking is really of no importance, for the mouth will be raised clear again for breath when the next arm-pull is made; but if you prefer to keep your head up all the time, you should make a slight downward pressure of the hands when you are drawing them in towards the chin.

Persevere with one attempt after another, beginning with the same push-off and glide, and aiming constantly at getting a little further than you did last time. It will not take long to swim your first, thrilling five yards—and after that, of course, you are no longer a non-swimmer!

Development of Style

Your progress now will depend entirely on close attention to details, and on gradual development of good

style. Continue to do longer distances until you can swim several hundred yards without effort. Watch that your fingers are always held together, not spread apart; that you do not jerk up and down in the water, but remain on "an even keel"; that you glide as far as possible after the kick, with arms, body, and legs in line, in *one* of the drill; that your movements do not get hurried.

Your first swim into deep water will be something of an adventure, but there is no need to be the least bit nervous about it if you can already cover ten or twenty yards in the shallow. Swim to some definite point, like the next set of steps, and take your time about it.

By this time, with a fair mastery of the breast-stroke, you should learn to tread-water—which is equivalent to "standing still" in deep water. It is most useful to be able to take a momentary rest in this fashion, or to pause and chat with a friend.

All you have to do is to let the body drop into an upright position, and then to perform a rather quick breast-stroke kick, vertically. The hands can paddle backwards and forwards, with some downward pressure, just in front of the chest.

After the Dive

You should also learn to start swimming after having jumped or dived straight into deep water. A moment's treading-water may come first, until you "get your bearings"; but with a little more experience there will be no difficulty in throwing yourself forward into the stroke straight away.

There is so much of swimming

The person with a sense of beauty will be attracted by that most lovely stroke, the back crawl.

beyond the mastery of breast-stroke, and from now onwards you will explore those realms of the art and those phases of ability which most appeal to you. There are many branches of swimming—the strokes, about a dozen of them; plain and fancy diving; life-saving methods; fancy and ornamental swimming; water games; speed and distance work and competitive swimming; combined swimming and figure floating, and so on.

If you are on holiday, bathing and water-games will probably appeal to you; certainly you will need to master other strokes as soon as possible, probably beginning with life-saving back-stroke. For the athletically inclined, the crawl and fancy diving will make an immediate appeal; while the person with a keen sense of beauty will be attracted by that most lovely stroke, the back-crawl, and probably by fancy swimming. For the tremendously strenuous, there is water-polo; and for the delicate invalid, at the other extreme, there is placid back-swimming and floating.

So swimming can be adapted to

every temperament; in this respect there is no exercise or recreation to compare with it.

Just a few last words of general advice:

Never forget the rule already mentioned, to allow at least two hours to elapse after a meal before entering the water.

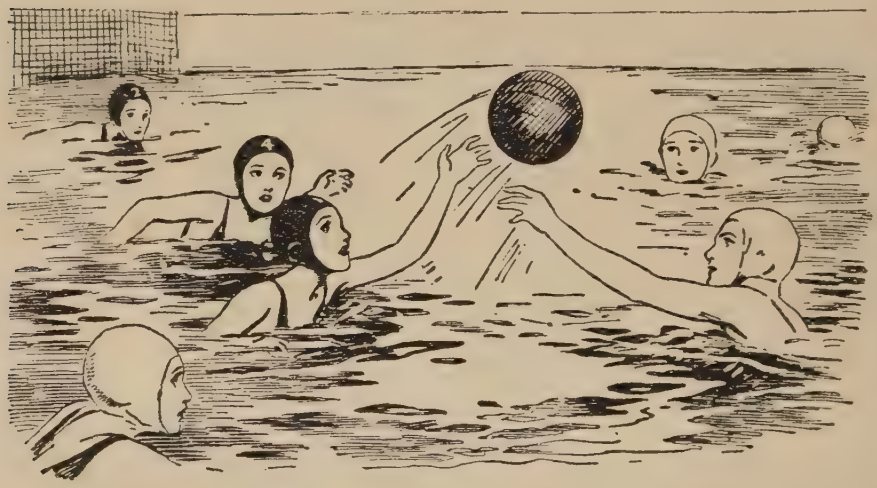
Don't prolong your bathe until you feel chilly. The right time to come out is when you are still in a delicious glow, for then that same glow will be brought out with you. But stay until you are cold, and chill and lassitude will follow.

Dry yourself well and vigorously; don't stand about in a wet costume. See that your hair is dried, too.

At the sea, always bathe with an incoming tide; never go into the water from any unfamiliar lonely spot. If you are off the regular bathing beaches, always get advice.

Beware of currents, tides, weeds, hidden rocks, cold springs.

In short, don't take risks. Planned wisely, your bathes need contain no element of danger, but on the contrary should give you such health, enjoyment, and happiness as only the swimmer can know!



For the strenuous, there is water polo.

WHAT to EAT and WHAT to AVOID

THE choosing of suitable food is of the greatest importance to health and fitness.

In spite of the fact that it is so easy to obtain a good working knowledge of food values, there are few households in which the subject is studied with intelligent interest.

A proper knowledge of the relative values of food stuffs can also make an appreciable difference in the household bills. Many of the more highly priced commodities do not yield as profitable a return in replacing the wastage of body tissue as do those of humbler origin. For example, a smoked herring contains two-and-a-half times as much protein, and almost as much fat, to the ounce, as the same quantity of shoulder of mutton. An ounce of cheddar cheese is far richer in food values than an ounce of lean beef.

Every variety of food we eat and liquid we drink (for fluids have their own importance) has its specific value. That is, it has its own particular work to do when it reaches our bodies.

Feed the Machine

The body may be likened to a complicated machine which requires constant attention and careful refuelling to keep it in good running order.

It must have a supply of materials with which to rebuild the tissues which are daily impaired through the mere wear and tear of ordinary life. It must have foods whose especial function is to produce heat and energy. It must, each day, have its quota of such chemical salts as iron, magnesium, sodium, calcium and potassium to assist its own chemical processes. It also calls for a certain amount of what is known as "roughage" to stimulate the organs whose particular function is the elimination of bodily waste products, and it ought to be given about five pints of liquid in the twenty-four hours.

Furthermore, it is of importance that these ingredients be supplied in their proper proportions, and be correct as to collective daily quantity.

Tissue Building

Proteids are the foods whose main work is to build up tissue. They are to be found in varying amounts in all kinds of flesh, fish and fowls; in cheese, eggs and wheat, and there is even a trace in certain vegetables and raw fruits, such as cabbage, lettuce, tomatoes and radishes, onions, carrots, beets, potatoes, oranges, peaches, pine-apples strawberries, gooseberries, melons, bananas and plums.

But it is really for its carbo-hydrate constituents and vitamin contents that we reckon with the vegetable world in arranging the daily diet.

Both carbo-hydrates and fats are generators of energy and heat, but fats taken into the system produce a much larger volume of heat than anything else, and this is why in cold weather we require more of them in our food, and also why there is such a large consumption of animal fats by people like the Esquimaux living in the frozen North.

In recent years, science has made great strides in the matter of dietetic investigation and experiment. We have now learned the supreme importance of the elements in our food to which have been given the name vitamins.

Heat and Energy

We have the unit of energy, called a calory, by which it is possible to measure approximately the amount of heat and energy which we give out and require to have replenished regularly. (For example, *see under* "Calory" in Medical Enclyclopædia.)

What are Vitamins?

Up to this point we may have kept strictly to the generally recognised proportions of the three main divisions of food constituents, but nevertheless our dietary will not be one which ensures a healthy body unless we have been careful to note that the vital vitamins are also present in adequate quantities.

What are vitamins and what is their peculiar province? They are more or less mysterious substances which have been found to be absolutely necessary to complete growth and perfect nutrition.

When there is a deficiency of one vitamin or another in our daily food, then our general health soon begins to suffer. In the case of young children, growth may be retarded altogether, and actual disease, such as rickets or scurvy, make its appearance.

Medical science has isolated at least five different vitamins, these being tabulated as A, B, C, D, and E, and discriminated by the different effects the lack of them produces on the human body.

Each vitamin has its own individual work to do besides often acting in conjunction with one or more of the others.

Thus vitamin A is asociated with vitamins B1 and B2 in promoting the general growth of the body, the B vitamin especially being concerned with the nourishment of the nervous system.

Deficiency of vitamin A in the diet is speedily followed by general debility; it is also the cause of a disease of the eye (Xerophthalmia.)

It is interesting to note that the presence of plenty of vitamin A in the daily meals has proved an important factor in helping the body to resist the inroads of bacterial germs. Vitamin A is mainly found in animal fats; in milk and its products, such as cream, butter and cheese, in the fat of butcher's meat, in fatty kinds of fish (herring, sprat, mackerel and salmon) and in the yoke of an egg. It is also present in wheat, spinach and lettuce, and in most of the "oily" nuts.

Vitamins B1 and B2 appear in egg yoke and wheat germ. They are contained in brains, sweetbread, liver, fish roe, the bran part of cereals, peas, beans, lentils, most green vegetables, and yeast extracts like "Marmite"

In the absence of these vitamins, nervous diseases occur, and a backwardness of the normal growth in children.

C is the vitamin which is largely found in all kinds of green vegetables and fruits generally, more especially in their raw state. It is very easily destroyed by contact with alkalis such as soda, etc., and also by heat, hence unless such vegetables and fruits are very carefully cooked, they lose most of their value as a nourishing food. As C is the little vitamin whose work is to prevent scurvy, it is most essential to the diet. Fresh fruit and vegetables should, therefore, form part of the daily food of every man, woman, and child—the latter merely having his few spoonfuls of fruit juice until past the infant stage.

A point to be remembered is that the fresher the fruit and vegetables, the more of vitamin C reaches the consumer. Another is that the humble potato contains a certain amount of vitamin C, so that when greens and fresh fruit are not available, it can help to make good the deficiency.

The common practice of adding a pinch of bi-carbonate of soda when cooking green vegetables, to preserve the bright green of their colour, is one against which experts on health matters have long preached—I am afraid with little avail. The average woman is still up in arms if the brussel sprouts and cabbage appear at

The fresher the fruit and vegetables, the more of vitamin C reaches the consumer.

table with the yellowish tinge boiling or steaming is apt to produce. Yet for the sake of appearance (is not that green appearance simply a matter of fashion?) the main wholesomeness of the food has been sacrificed.

Formation of Bones

The properties of vitamin D being

greatly in demand in connection with bone formation, it is essential for it to be present in the diet of young children, to promote the growth of both bodily bones and teeth. It is present, like vitamin A, in animal fats, and, in fact, in the same kinds of foodstuffs in which we look for the A vitamin, but such substances as cod liver oil, cream and butter show a particular richness in vitamin D. This is why a disease such as rickets responds successfully to a course of cod liver oil.

It has been possible in recent years to isolate vitamin D and to manufacture a preparation of it in concentrated form. This can be very useful in certain advanced disease conditions, administered under medical supervision of the strictest kind. But mothers cannot be too strongly warned against the use of such concentrates on their own initiative, when a child seems rickety and underdeveloped.

I have mentioned above how frequently the vitamins are interdependent for their best results not only upon each other, but also upon other constituents in our food.

In the case of vitamin D, it is necessary that both lime and phosphorus salts should be present with it in order for it to perform its appointed functions.

These salts find their way into milk, for example, through the grass eaten by the cows. This is the reason why the milk from certain parts of the country is better than that from others, is richer in a natural vitamin D content, and in various mineral salts.

The last vitamin with a label is E, and is to be found very widely distributed among all types of food, though perhaps in a slightly higher degree in oils got from cereals (wheat in particular). So far as is yet known it is the vitamin essential for reproduction of the species.

The Importance of Balance

Having run through the vitamins and their functions in helping to keep the body fit, let us turn our attention to a number of the ordinary foodstuffs with which the average housewife is constantly dealing. Let us study these from the angle of their caloric value, that is, the approximate value each has in making up the sum total of a properly-balanced diet.

Balance is the crux of the whole subject of healthy feeding and yet it is the point more often forgotten or disregarded than any other.

To realise this it is only necessary to go into any restaurant at lunch time and notice the kind of meals that are frequently ordered. Beefsteak pudding and potatoes are followed by jam roly-poly or some other boiled or steamed "sweet," consisting mainly of bread crumbs and flour; or else a bun and a pastry are consumed with a cup of strong tea or watery coffee. In the first instance, a load of starch has been taken into the system sufficient for several, instead of one day's needs, and the digestion is expected to cope with the task. Though certain of the vitamins are present, their value is cancelled by the lack of others as essential.

In the second case, there is entire absence of vitamins unless butter is lavishly spread on the bun, and milk or cream added to the beverage. Again the food is wanting in balanced variety of ingredients.

Green vegetables in the place of

potatoes and stewed (not tinned) or fresh fruit instead of the steamed pudding would have made of the first meal a wholesome one, while a slice of brown bread and butter with cress or an apple would have afforded more real nourishment than the bun, etc.

The gravest danger, however, to health lies in the fact that in nine cases out of ten these same people will find on reaching home quite as ill-chosen and wrongly balanced an

Milk is as nearly as possible a perfect food in itself.

evening meal awaiting them as that which they chose at mid-day.

It is not necessary, nor indeed practicable, for the ordinary housewife to keep in her head scientific tables of food constituents. Nor need she weigh out the family meals in exact calories. But it is a policy of wisdom to learn something about the materials with which these meals will be made and so be sure she is providing a "complete" diet for those of her household.

Nourishing Foods

The value of butcher's meat for body building purposes is much over-rated. There are many other commodities with very much the same proteid content, which means they can be substituted as a change for the meat course without any loss of nourishment.

Many kinds of cheese, fish, and birds are examples of this, and it must not be forgetten that by combining eggs, raw vegetables, and fruits in salads and serving these with a cream dressing the caloric measurement and the actual nourishment taken, is greater than that to be found in a similar quantity of beef or mutton. Herring and mackerel, as I have mentioned, have a high nutritive value and have the added advantages of being cheap and usually easily obtainable. They can be served in as appetising a manner as the more aristocratic sole, as I shall show in succeeding recipes.

Many people think chilled or frozen meat loses its nourishment in the process, but this has been proved to be wrong and has mainly arisen because the art of bringing it to a normal temperature before cooking and then cooking it very slowly, is imperfectly understood. Another fallacy is that there is not so much nutrition in the less expensive "cuts" of meat as in what we are accustomed to call the better ones. When it comes to caloric importance, there is really no difference, if the meat has been cooked in such a way as to retain all its goodness.

Meat in the forms in which it is commonly eaten is muscle meat and lacks sufficient mineral salts and vita-

mins, so it is necessary to combine it with other foods particularly rich in these salts to supply the deficiency. Hence the reason for serving vegetables with flesh foods.

Milk is as nearly as possible a perfect food in itself, inasmuch as it not only contains animal protein, fat, sugar, and mineral salts, but is also rich in vitamins. As cooking in no way

The cheaper kinds of fish, such as herring and mackerel, are the most nourishing.

affects the value of its constituents, milk is a wonderfully helpful ally in the kitchen, because its introduction into soups, puddings and sauces, etc., adds greatly to their nutriment, as well as enhancing their richness.

The egg is another example of a natural, well-balanced food, for in the albumen of the white there is a valuable amount of protein. The yolk provides the wanted fat, while the precious vitamins and mineral salts are also present.

A Perfect Substitute

Because of the amount of nourishment in milk, eggs and cheese, these, eaten with wholemeal bread and green salad, make a perfect diet as substitute for butcher's meat or other flesh foods. It will, therefore, be understood they should not be included, except in very small quantities, in the same meal at which there is a meat course.

Although animal flesh is by no means absolutely necessary to our existence, it is of real importance. Our bodies should receive animal protein in some form, and this is where eggs, milk, and its products, such as cheese, provide it.

Dr. S. Henning Belfrage, an authority on dietetics, suggests as a rough guide the quantities of certain foods which will give us the required amount of animal or first-class protein, namely, 4 oz. cheese, 5½ oz. beef, 7 oz. lamb, 7½ oz. mutton, 4 to 4½ eggs, 10 oz. cod, 7 oz. herring, 1½ pints milk.

Potatoes, nuts, peas, beans, and cereals such as wheat, oats, barley corn and maize, though deficient in certain qualities required to build up good body tissue, are nevertheless nourishing when combined with milk and butter.

Just as the cheaper kinds of fish, such as herring and mackerel are the most nourishing, so it is found the various internal organs of animals, liver, heart, sweetbreads, etc., contain a better balance of the recognised food constituents than the muscle flesh. Here again by judicious buying, the housewife can save money and add variety to the daily menu.

The chief fuel foods are in the form of starch, sugar, and fats. The processes of digestion convert starch into sugar, therefore too large quantities of starchy foods, i.e.: dishes made from what we know are farinacious

foods (rice, sago, etc.), white bread, potatoes, and so forth are decidedly harmful if much sugar in other forms be added to the diet.

The most wholesome and easily digested form of taking in the sugar needed to replenish our supply of energy as well as heat is by the fruit sugars.

Many people are apt to look upon fruits as a luxury whereas in reality they are a necessity to the well-balanced diet, containing, besides sugar and valuable vitamins, nourishing substances not to be found in any other edibles. Leaves, roots, seeds and fruit—every part of the plant is required if we are to secure all we need in our food.

Natural Sugars

The fuel value in fruit sugar, to be got from a good sized orange, is equal to that provided by a small cup of milk or slice of bread. Vitamins A and C and a goodly proportion of lime, potash, and soda are in orange juice. Bananas are a highly nutritious food, ripe apples, and the edible berries contain the healthful mineral salts, sugar and vitamins, while the dried fruits such as dates should be much more largely utilised in our dietary than they are, because of the amount of natural sugar in them.

Honey is another natural sugar, the use of which is to be advocated, especially in the case of children. The refined cane sugars we get to-day have lost their nutritive value in the process of manufacture. That is why coarse brown sugar is better for us, also why black treacle is superior to golden syrup, from a food point of view.

This same process of refinement is applied to cereals with like result The valuable parts of the grain are milled away. So if we buy the whitest flours, the polished rice and barley, we are really being extravagant because we are paying for little or no food value.

Bacon and butter may be called expensive fats but as a small quantity goes a long way in nourishment, they are not so in the end. Margarine is much cheaper and is quite a good fat food, but it does not contain vitamin A. This can, however, be added to the diet by a little milk or good dripping. To quote a medical authority, a properly balanced diet is "a diet which consists of a liberal allowance of good wholemeal bread, oatmeal and other cereals, dried peas and beans, potatoes

Go into any restaurant and notice the kind of meals that are frequently ordered.

and onions, milk, butter, and cheese; a little bacon and a little meat, some raw vegetables and dried fruits, a little fresh fruit, and an occasional egg. This is within the reach of most family budgets. It can be still further reduced in cost by the use of fresh herrings instead of expensive cuts of meat and the use of margarine in place of butter, and by selecting the cheaper kinds of green vegetables and fruits, such as cabbages and oranges which are not only inexpensive but more valuable for their special purposes than many of the costly articles."

To sum up, several points must be kept in mind. Very young children and old people cannot assimilate foods too rich in fats and sugars.

The growing boy and girl and the manual labourer require much more energy-producing fuel than the sedentary worker. Children also need a sufficiency of bone-forming food. Do not forget fluids have their own value as a "food," and though a certain amount of water is contained in many foodstuffs, it ought to be liberally augmented. To get the full value from liquids, only small quantities should be taken with solids and some two or three pints over and above drunk daily between meals.

Above all, remember the importance of that balance when ordering meals.

The following examples will give an idea of how to balance meals.

Breakfast:
Cereal with milk or syurp.
Bacon and tomato.
Bread and butter. Rough, home-made marmalade. Tea or coffee.

Luncheon:
Fish, with egg sauce or grated cheese, served with slices of lemon or orange.
Mashed potatoes. Green salad.
Boiled or steamed pudding, with sweet sauce.

Dinner:
Half a large orange, served in the same way as grape-fruit.
Vegetable soup.
Roast mutton with red-currant jelly, or boiled mutton with onion or celery sauce.
Fruit salad made mainly from fresh fruits (apple, orange, lemon, grapes, dates and figs, and other fruits in season.)

Breakfast:
Grill of sausage, bacon and egg.
Wholemeal scones. Butter and honey. Tea or coffee.

Luncheon:
Stewed or grilled chops.
Boiled potatoes, carrots and turnips with white sauce.
Milk pudding and stewed fruit.

Dinner:
Grape-fruit.
Fish or fowl.
Potato balls. Steamed celery, chicory, or a green salad.
Fruit pie with cream or egg custard. Cheese savoury.

Breakfast:
Stewed prunes or apples, with a little crisp flaked cereal.
Boiled egg. Toast and butter. Syrup or jam.

Luncheon:
Macaroni and cheese or spaghetti and tomato.
Mixed fruit and vegetable salad with good oil or cream dressing.
Banana jelly.

Dinner:
Slice of melon.
Pea or lentil soup.
Roast veal with compote of prunes, apple and banana.
Baked potatoes.
Sweet omelette.

Ideas which come from over the water make a nice change sometimes. Try orange and banana with goose and duck or wild fowl (and even with any of the darker meats) and see how they take away the oily richness which is often so cloying.

Fried fish and such fish as herring and mackerel are greatly improved with a sauce made from well-cooked and sieved green gooseberries, while apples cooked to a purée to which a little ginger and spice is added are a delightful accompaniment to cold meats.

Any fruit salad tastes really good with almost all cold meats or cold fish and makes a nice substitute from the usual vegetable varieties.

The following two recipes which are a little out of the ordinary, are recommended for breakfast dishes.

Egg Toast

Remove the crusts from several slices of stale bread (quantity as required) about an inch in thickness. Next cut into thick finger lengths. Beat well two eggs, add these to one pint of milk, whisk together and season with a little salt and white pepper. Now place the fingers of bread in the basin containing the eggs and milk and *leave till soaked right through.* Upon this complete saturation depends much of the success of the "toast," and it generally takes about half an hour. Fry each finger in good beef or ham dripping till a nice golden brown and serve piping hot.

Two More Ways with the Egg

Potatoes left over from the previous day's dinner should be steamed (freshly boiled potatoes can also be used) and then beaten with milk and several pats of butter to the consistency of thick cream. Into this mixture stir several hard boiled eggs which have previously been sliced or quartered. Pile into scallop shells or suitable ramekin dishes and garnish with a tiny sprinkling of finely chopped gherkins or red pepper.

No. 2.

Butter the required number of pieces of bread to cover the bottom of a warmed fireproof dish which has also been well buttered. Thinly cover each piece with grated cheese and on to each carefully break one egg. Place the dish in a hot oven for a few minutes until the eggs are firmly "set," the bread and cheese being then also "cooked" sufficiently.

Nut Soup

Ingredients:
One quart white stock.
½ pint milk.
One gill cream.
4 *ozs. mixed ground nuts.*
1 *teaspoonful sugar.*
Salt to taste and pepper to taste.

After removing all fat from stock, bring it to the boiling point and then add the ground nuts, stirring well. Cook for twenty minutes, season to taste before removing from fire, put in the cream and sugar. Strain before serving. Maize meal may be substituted for the nuts and gives a change of flavour.

The water in which the vegetables have been boiled makes a highly valuable "stock" for all kinds of soup because it contains the mineral salts and vitamins which have been lost from the vegetables themselves in the course of cooking. This water,

however, must be used the same day, never held over.

LIGHT LUNCHEON DISHES

Baked Eggs

Ingredients:

Eggs. *Seasonings.*
Butter. *Tomato Sauce.*

Put some tomato sauce into small greased fireproof dishes. Break an egg into each, being careful to keep them whole, add seasoning, and put a tiny dab of butter on the eggs. Place in a hot oven till set. About ten minutes usually.

Another method—

Ingredients:

½ *lb. tomatoes.*
2 *ozs. grated cheese.*
4 *eggs.*
Salt and pepper.
1 *oz. butter.*

Lay tomatoes, previously scalded, skinned and sliced in the bottom of a greased dish, break the eggs on top of tomatoes, season, then add a layer of grated cheese with little dabs of butter over it. Place in a moderate oven and allow to bake about 15 minutes.

Many changes can be rung on these egg dishes by the use of varying foundations and mixtures with cheese and tomatoes, curry powder, macaroni, spinach and other vegetables.

Slices of cooked carrot with a thick white sauce and chopped hard boiled eggs on top is yet another variety, and combined with flaked, well boiled, Spanish onion a baked egg is also appetising.

Cheese and Onions

Ingredients:

2 *large Spanish onions.*
4 *oz. cheese.*
A little milk.
Seasoning.
Dab of butter.

Boil the onions till very soft so that they will flake easily with a fork. Grate the cheese and put in pan with butter, milk, and a little pepper and salt. Cook until consistency of thick cream. Place flaked onion on well warmed flat dish and pour cheese mixture over it. Serve very hot. It will be found that those who cannot eat onion, as a rule can enjoy and digest it if served in this way.

Fish Sausages

Ingredients:

6 *oz. cooked finnan haddock (or herring or mackerel).*
2 *oz. breadcrumbs (white).*
1 *yoke of egg.*
1 *egg.*
½ *teaspoonful mixed herbs.*
Fat for frying
Brown breadcrumbs.

Mix together the fish (boned and finely chopped or flaked), white breadcrumbs, herbs and egg, well beaten, till the whole is of pastelike consistency which can be shaped into sausages. Brush each "sausage" over with yolk of egg and roll it in the brown breadcrumbs before frying in smoking oil.

Bacon and Egg Pie

Ingredients:

6 *rashers of streaky bacon.*
6 *oz. short crust pastry.*
6 *eggs.*
Pepper and salt.

Form "cups" by rolling rashers of bacon. Place these in pie dish, breaking an egg into each cup and seasoning same. Cover the pie dish with thinly rolled-out pastry. Decorate and trim the edges, brush over with a little yolk of egg or water and

bake for half an hour in a moderately heated oven.

Fillets of fresh herring may be substituted for the bacon.

Cauliflower Fritters

Ingredients:
Sprigs of cooked cauliflower.
Batter.
Frying fat.

Make an ordinary batter and dip each sprig of the vegetable into it. Then fry, one at a time, in deep, boiling fat. Drain well on paper, sprinkle with a little red pepper, and serve hot.

Mexican Date Pie

Ingredients:
6 ozs. sugar.
2 eggs.
½ pint milk.
¼ lb. stoned dates.
Enough short or flaky pastry to make a "flan" or open tart.

Chop the dates. Beat together the sugar and eggs adding to them the hot milk. When the pastry in its tin is nearly ready, place the dates on it, pouring the hot mixture over them. Then bake slowly till all is set and pastry thoroughly cooked.

The mixture made with one egg, will be welcomed in the nursery served with egg-less custard.

OTHER SUITABLE RECIPES FOR THE NURSERY

Banana and Apple Tart

Ingredients:
Bananas.
Sugar.
Cooking apples.
Plain pastry or toasted breadcrumbs.

Peel and slice bananas, peel and core apples (number according to requirements). Place the fruit in pie dish in alternate layers with a sprinkling of sugar over each. Add about two tablespoonfuls of water to the fruit. Bake in moderate oven till fruit is cooked, then cover with thick layer of toasted breadcrumbs if for small children. If for schoolroom age, cover with crust in the usual way before cooking.

Savoury Rice

Take half a teacupful of *unpolished* rice. Boil this in a pint of water along with an onion core, a sprig of parsley (or a little good chicken stock may be used). So that the rice will be thoroughly well cooked and absorb all the moisture, use a double saucepan and remove the lid when it is almost cooked to allow superfluous steam to escape. When ready, stir in a good sized pat of butter and sprinkle with grated Parmesan cheese. (This must not be cooked.) A little minced liver or chicken or a few green peas added make a pleasant variety, but whichever way the savoury part is added, this makes a good main dish for a child's dinner to be followed by some form of fruit.

Honey Blancmange

Make a blancmange with corn or rice flour and milk. Pour into a mould and when set turn out and cover with clear run honey by dripping same from spoon. Serve with a little cream. This is a simple, very pleasant and nourishing sweet.

Fish for the Little Convalescent

Here is a dainty way of serving fish, if a child's appetite needs tempting after an illness.

Ingredients:
½ lb. cold, cooked white fish.

½ pint good white sauce.
Yolk of hard-boiled egg.
Fine brown breadcrumbs.

Make the sauce with 1 oz. butter, 1 oz. flour, half a pint of milk.

Melt the butter, add flour, and stir until smooth.

Remove from heat and add the milk gradually, beating well until smooth. Return to heat and stir until boiling. Cook for four minutes. Season with salt and pepper.

Crumble the egg yolk, and add to the white sauce. Flake the fish finely, season with salt, and sprinkle a little chopped parsley among it.

Grease some scallop shells, small fireproof dishes or old saucers. Fill with layers of fish and sauce using sauce for the final layer. Sprinkle with breadcrumbs and place small dabs of butter on each.

Bake in a moderate oven for fifteen minutes. Garnish with tiny sprigs of parsley and serve on a plate with a dainty dish-paper on it.

Spinach Toast

Spinach is so rich in iron that it should form part of every child's diet, but it needs careful cooking to make it attractive.

Creamed in the following way, and combined with an egg, it forms a complete meal, so that it is well worth the trouble involved.

Ingredients:
1 lb. spinach.
¼ oz. butter.
½ gill of milk.
½ oz. cornflour.
Pinch of salt.
Dash of pepper.
New laid egg.
Round of buttered toast.

Remove stalks and fibres from the spinach and wash well in several waters. Put into a large saucepan, with no water except that clinging to the leaves.

Bring to the boil slowly, then boil quickly until tender—about twenty minutes. Press free of water and chop finely or rub through a sieve.

Add salt and pepper. Melt the butter, stir in the cornflour, add the milk and stir until boiling. Cook for five minutes, stirring all the time, making a thick sauce.

Add the spinach, stir until thoroughly hot. Have ready a round of buttered toast, spread the spinach smoothly on the toast, leaving a slight hollow for the egg. Poach the egg, place on the spinach, and serve very hot.

The Practice of Massage

MASSAGE is a very highly skilled and a very ancient art. It is known that it was practised by the Chinese three thousand years before Christ. The Chinese taught it to the Japanese. In Japan, it is a profession of the blind. We know that the great Roman emperor, Julius Cæsar was massaged. He was "pinched" all over for neuralgia. Two hundred years ago, the French used massage. In 1813, a Swedish doctor, Ling, started his Swedish Medical Gymnastic system in Stockholm. Our present methods owe much to him and to his teaching.

In 1877, Doctor Weir Mitchell, of Philadelphia, used massage very largely in his system of treatment for hysteria and neurasthenia. Nowadays, psychotherapy has taken its place in the treatment of these troubles. In Hai Wai, in the Pacific Islands, massage is known as Lomi-lomi, and the natives give it in return for hospitality. One use of massage which now is happily dying out was used by the cannibal chiefs. They had the abdomen massaged before a feast, in order to get up a good appetite.

The word "massage" is from the French *masser*, to knead. Massage is the name given to a collection of movements. These movements are effleurage or stroking; petrissage or kneading; rolling and picking up; clapping, etc.

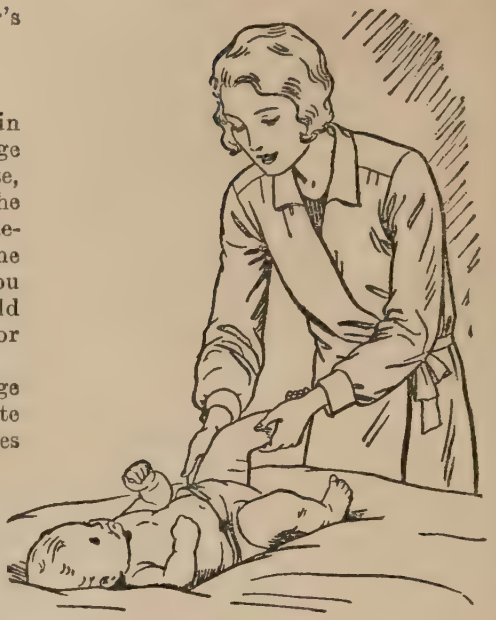
Massage is highly skilled work, and it is also very tiring. It can only be undertaken by a healthy person. A masseuse (or masseur) has to take a full training and to get a certificate of proficiency before she (or he) can practise. A student masseuse must learn the same amount of anatomy and physiology that is required of a third year student of medicine, thus she has to work hard and know her subject thoroughly. When fully qualified, she becomes a member of the Chartered Society of Massage and Medical Gymnastics, and may add the letters, C.S.M.M.G., after her name.

She may work only under a doctor's orders.

Massage in the Home

There are various complaints in which a slight knowledge of massage may be of use in the home. Of course, this must be used only with the greatest care and gentleness. Remember that great harm can be done by massage wrongly given, and if you are in doubt as to whether it would be safe to attempt it, ask your doctor about it.

A patient who is to have massage should be completely at rest and quite comfortable, so that all his muscles are relaxed. There must be no chance of draughts from window or door. The part to be treated should, if a limb, lie on a pillow. After all and any treatment, complete rest for at least half an hour is a necessity, if the patient is to receive full benefit.



Keep the fingers together and place the hand palm downwards on the outside of the leg.

Helping the Rickety Baby

A mother can do a great deal sometimes towards helping her baby if it should suffer from rickets. This disease may have caused bow-legs or knock-knees. The child should lie on a bed. It should be in such a position that it can be reached without stretching, and the bed should be at the right height, so that the mother's back does not ache from bending too low. The hands must be warm and dry.

First, we will consider bow-legs. The movement to be used is that known as effleurage or stroking. Warm some olive oil and pour a little into your hand. Keep the fingers together and place the hand, palm downwards on the outside of the leg. Now using the palm and not just the finger tips, stroke steadily upwards. Remember, in massage, the movement is always towards the heart, not away from it. When you get to the top of the leg, do not lift your hand up, but glide it lightly down again to the ankle and start once more. Use a firm but light pressure. It would be well to do this movement fifty times. Next, using the lower part of the palm of the hand, rub with a circular movement until you have spiralled up the outside of the leg to the top. Here the object is to move and strengthen the deep muscles, so use some pressure and try to move the flesh on the bone. This should be done twenty times.

Then comes picking up. Here you still work up the outside of the leg,

picking up the flesh. It is as if you were trying to pinch the patient, only you use your whole hand, and, of course, you try not to hurt. This movement should be done six times.

When massaging for bow-legs, it is well to combine some exercises with the treatment. The child should sit up on the bed, with his legs bent and the knees together. Then try to persuade the knees to go into the natural position with your hands. Lastly, finish by rubbing all round the knees.

Regularity Essential

It is most important that all massage and exercises should be done regularly. Ten minutes' work a day is worth more than half an hour every three days. It is the slow, steady building up of the muscles that is needed, and this will never be got by irregular work.

Knock-knees is another deformity that is caused by rickets. Here the same movements are used as for bow-legs, but they must be applied to the front of the leg and thigh, not to the outer side; you are working on entirely different sets of muscles. The child should sit cross-legged on the floor several times a day. Then twice a day, he should sit with a small pad between the knees and with the ankles tied together. Of course, it is useless to treat the deformities caused by rickets if the disease itself is not being treated. Cod liver oil and fresh fruit must be taken, and the child should be out in the open air and sunshine as much as possible.

The Weak Back

Often a child has a weak back. Here massage in the right way can be of great benefit. The child should lie on the bed, face downwards. There should be a small pillow under the abdomen, and a little one for the head, if liked. The face should be turned to one side, and the arms placed downwards by the sides. It is very important that the child should lie quite straight.

Now stroke up the back towards the head, first along one side of the spine and then along the other. Put the pressure on the upward stroke, and not on the downward. This movement should be done fifty times.

The next movement to be used is that of kneading. Knead as if you were making good pastry: one hand may be used to steady the part and the other to do the work. This movement should also be done up both sides of the spine.

Next, use the picking up movement. Lastly, finish off with twelve stroking movements on each side.

The patient should walk along the line on tiptoe.

Never attempt to massage the spine in any way. Warmed olive oil should be used in all these cases. It nourishes the tissues and lubricates the hand, so that you will find it glides easily over the skin.

Massage for Lumbago

Massage is used a good deal in lumbago. This trouble is due to inflammation of the muscular tissues, and is very painful and crippling. If

The hands should be brought down the side of the face and neck.

the patient can take a hot bath before treatment, so much the better. Heat helps to relax the muscles and by drawing the blood to the surface, causes a flow through the affected part. If he is unable to take a bath, then bathe the lumbar region with flannels wrung out of water as hot as can be borne. Dry well and leave tucked up in bed for ten minutes. Now turn the patient on his face, with a small pillow under the abdomen.

You will need some Iodex ointment, the kind that is combined with Methy.-Salicyl. Start by rubbing a little into the back. Do not be alarmed at the messy appearance of the back. The ointment will be rubbed into the skin before you have finished and any marks made will wash out of the linen. Stroke up all the muscles round the painful region. Do this for ten minutes. Then, using only the pads of the fingers, dig into the painful parts. Where you find a place that seems more painful than the rest, dig well into it. Do not be afraid of hurting your patient. This is one of the cases where pain will have to be borne if any good is to result. The digging movement should continue for ten minutes. Then turn him round again on to his back, and leave him lying on a warm, not a hot, bottle. Heat is most helpful and comforting in lumbago, as witness the old-fashioned remedy of ironing the back.

Nervous Headache

A nervous headache can sometimes be relieved by gentle massage. This is done entirely by using the stroking movement. The room should be darkened. A hot bottle should be put to the sufferer's feet, and she should lie on her back, comfortably relaxed. The hands should be laid, finger tips touching, on the midline of the forehead. They must be brought, with a gentle yet firm stroke, along the forehead, and down the side of the face and neck. This may be done fifty times. Then turning the patient on to her side, the hands should be brought from the forehead, over the top of the head, down to the shoulder

blades. This should be done fifty times. For this treatment, the hands should be used dry, unless the patient likes a drop of eau-de-Cologne on them.

Feet Turned Inwards

Sometimes a baby is born with his feet turned inwards. It looks as if the mite would never be able to walk. But it will be all right in time if treatment is started at once. The warm, well-oiled hand should rub gently and stroke over the whole of the leg. Then the foot should be taken hold of firmly, and very gently coaxed back into the position of a normal foot. Of course, it will not stay "put," and you will not be able to get it right at first. If you persevere, however, you will get it correct in time.

When you start to exercise the feet, you may think that you will hurt baby. But you need not be afraid if you are gentle: his bones are still soft and they can be moulded. It is only if the treatment is left too long before being started that simple massage will not do good. Your doctor will give you advice, and will tell you how to apply the small splints that must be worn day and night. Massage must be given two or three times a day.

Flat Foot

A very common complaint is flat foot. This is apt to occur in children between the ages of ten and sixteen, as well as in older people. The muscles of the foot stretch and the arch of the foot falls. Massage and exercises will cure this condition in a child, and will do much to help in an adult.

The leg should be rubbed from ankle to knee, using the stroking movement. Then the fingers should be placed under the arch of the foot on the inner side. A circular movement, tending to push up the fallen arch, is used. This should be done for ten minutes, twice a day. The exercises for this condition are very important indeed. A line should be drawn along the floor, or the join between two of the boards may be used. With bare feet, the patient should walk along this line on tiptoe, with the toes turned inwards. Very small steps must be taken. Next, he should walk round the room on the outsides of the soles of the feet, with the toes curled underneath the soles.

Relief can be obtained by gentle stroking over the ribs.

Now, he should pick up a handkerchief off the floor with the toes; then lie on the bed, with the knees bent up and together. One foot should be placed on the top of the other, toe and heel touching the leg. The top foot should be slowly drawn up the under leg.

The exercises should be done twice a day. Skipping is very useful, also

dancing. An arch falls because it has too much weight to support, as in the case of a very stout person; or because the toe and foot muscles do not get sufficient exercise.

A Cure for Constipation

Massage can be most useful for constipation, particularly in a child. The child should lie on the bed with the knees drawn up and together. This position keeps the abdominal muscles slack and so easy to get at. The warm and oiled hand should be placed firmly on the abdomen and the stroking movement used.

Start from the right side and work round to the left. Go all over the abdomen in this way. After stroking fifty times, start the kneading movement. Begin at the lower right-hand side of the abdomen. Knead up the side to just below the ribs. Then proceed across the body in a straight line to the top left-hand side, below the ribs. Go down to the lower left-hand side. Draw the hand gently across the lower abdomen to the right side and start again. Never attempt to knead across the lower abdomen; you may do some damage. Do the movement six times. Lastly, hollow up your hand into the form of a cup, as if you were going to try and drink out of it, and gently slap all over the abdomen, for two minutes. The slapping movement will not hurt, it will stimulate. If it causes pain, you are not doing it in the right way. All these movements should be done once a day for ten minutes.

Massage for Slimming

Excessive fat may be reduced by massage. The movements used are deep kneading, stroking and pinching the fatty parts, such as over the hips and abdomen. Then the movements for constipation may be done. Here again regularity is of more importance than a long time one day and nothing for two or three days. In cases of indigestion and flatulence, relief can often be obtained by gentle stroking over the ribs, from right to left, and then following on with the constipation treatment.

Fractures and Inflammations

Never try to massage a fracture in any way. Massage is ordered for such cases, but should never be undertaken by anyone who is not trained. Much damage and perhaps permanent deformity may result from unskilled massage. Never rub or massage an inflamed part. If it is red and hot, leave it alone, as far as massage is concerned. Any part that may be swollen should be left alone. You do not know what is underneath or what is causing the swelling: do not make it worse.

Never massage a pregnant woman. Never move or massage a leg affected with phlebitis, or white leg: you will certainly make it worse if you do. A person with a weak heart or with a high blood pressure should not have massage, except under doctor's orders and from a trained masseuse. And do not try to massage an elderly person without permission from his or her doctor. Lastly, a woman must not have abdomen massage during a monthly period.

Massage is of the greatest use in rheumatism, to prevent the crippling that would otherwise result from the formation of adhesions after the inflammation has subsided. This, however, can only be given by a masseuse.

The Do's and Don'ts of Sunbathing

SUNSHINE is absolutely necessary to us if we are to be healthy. Keep a plant in the dark, and it will grow tall, weak and straggly, and of a pale, yellowish-green colour. Deprive a child of the right amount of sunlight, and it will become sickly and develop rickets. And sunshine does not only keep us well, it cures diseases. It is the best and cheapest medicine in the world, and yet many people do not take full advantage of it.

Sunshine should never be kept out of a house. Curtains that keep out the sun may keep the carpets unfaded, but they will also keep the health of the dwellers under standard. So open wide your windows and let in the fresh air and sunshine.

When you go out of doors, notice how very little of your body is exposed to the air. Your face and hands, and unless it is winter, your neck. That is all, as a rule. What a waste of the sun that might be bathing your whole body in its health-giving rays! Naturally, you cannot be going about undressed, but you can take sunbaths, and in this way get the fullest possible advantage from the sunshine.

What Sunshine Means

Sunbathing is not a new idea. The ancient Greeks used to sunbathe more than two thousand years ago. They took exercise in their open air gymnasia and then bathed and rested, unclothed, in the sun. They knew all about the value and the health-giving power of the sun. And physically, they were the finest race the world has known. Then times changed. Man covered his body against the air, closed his windows, hung curtains and draperies to keep out the sun, and dirt and disease took the place of health. Now we are once again beginning to know what sunshine means.

It is only lately that sunbathing has become popular, and so many people really know very little about it, and do themselves more harm than good by it. For sunshine, wrongly used, is harmful. You should never lie in the sun, and then go indoors with a headache, feeling so tired that you hardly know what to do with yourself. That is not sunbathing, it is heat-bathing, and is doing harm to your body.

Sunbathing should be started slowly and carefully. Brunettes usually stand it better than fair women. Very young children and the very old;

people with heart disease or with a tendency to apoplexy, and those with phthisis or consumption, should not take sunbaths. The head should always be protected by a hat. A cotton sunbonnet is the best kind of covering, because this will protect the sensitive back of the neck. Otherwise, there is always a chance of getting sunstroke or a bad headache.

Let the sun shine on the feet and ankles.

Gradual Exposure

Those who are not used to sunbaths should start by exposing only the feet at first. Take off the shoes and stockings and let the sun shine on the feet and ankles for five minutes. Next day, give them ten minutes, and five minutes to the legs as far as the knees. On the third day, you can uncover the thighs for five minutes, and the rest of the legs for ten minutes. On the fourth day, give the back of the body five minutes' exposure and the part that has already been done can now have fifteen minutes. Next day, the front of the body may have five minutes' sunbath, the back ten minutes, and the legs and arms twenty minutes.

When you have thus by degrees exposed the whole to the sun, you can lie in it uncovered for ten minutes on your back, and for the same length of time, on your face. Gradually increase the period until your whole body is having a sunbath for half an hour, first on the back and then on the front.

Ultra-Violet Rays

Sunbathing should always be done in the open air. Lying undressed on a bed with the window closed and the sun streaming in on your body is not at all the same thing. It may feel comfortable, but it is not doing you very much good. The reason for this is that the part of the sunshine that is useful to your body is that part known as the ultra-violet rays. These rays do not pass through ordinary glass, so your shut window would prevent them from reaching you. If you cannot sunbathe out of doors, then lie on your bed in the sun by all means, but have the window wide open. Do not think that you will catch cold.

If you start slowly, as I have told you, you cannot catch cold. It was a Swiss doctor, named Rollier, who discovered that sunshine heals and prevents us from taking cold. Doctor Rollier has a sun school in Switzerland, where children have their lessons out of doors. The snow lies on the ground, yet the children do not feel cold. They wear the minimum of clothing, a pair of drawers and shoes. They are healthy and happy. At his clinic, people who have tuberculous joints lie undressed in the sunshine. They go there ill and crippled and they come away cured by the sunshine and the fresh, clean air. Here in

England, the same thing is happening. Doctor Gauvain, at Hayling Island, uses the sun to cure similar cases. And we are learning that sickly children are better if they go to open-air schools. It is again the fresh air and sunshine that helps them.

Sunbathing should be done during the morning hours, before the sun gets hot. Fog, dirt and smoke prevent the useful ultra-violet rays getting through, and the morning air is usually the cleanest.

The Value of the Garden

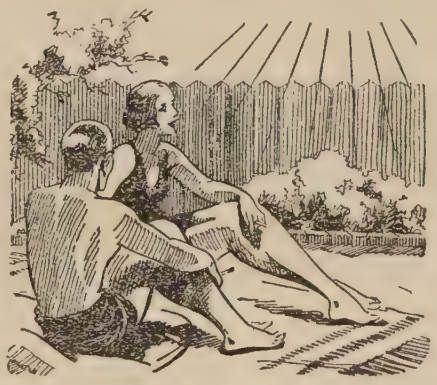
Where are you going to take your sunbaths? The best place is a secluded garden if you have one. There you can spread a rug on the grass and lie comfortably. If you have not got a garden, then perhaps you have a balcony that gets the sun. Or you may use your bed by a sunny, open window. Many swimming baths now have a place where bathers can lie in the sun before or after the swim. And some seaside resorts have enclosed a space for this purpose. But there are still not nearly enough of these places.

What are you going to wear? You can buy suitable sunbathing suits. They are like swimming costumes, but there is not so much of them. The backs are cut away and the sides, so that as much of the body is exposed as possible. Men wear swimming shorts and, of course, small children can wear nothing at all. Older children can wear a brief pair of knickers. And do not forget a hat for the head.

If you are a suitable person to have sunbaths, that is if you are well and do not blister, you should be exhilarated by the bath. You should have a good appetite and should not feel tired. You will be storing up health and energy for the months when the sun does not shine, and you will build up resistance to disease. Regular sunbathers find that they do not catch cold easily, and children who get plenty of sunshine grow up stronger and do not get any and every ailment that is going about.

The Prevention of Rickets

Now what happens when the sun is allowed to get to your body in correct doses? Let us take a growing child as an example. To avoid having rickets, the child must have a certain amount of calcium in the blood. This can be got from the food, and if this is deficient, it can be given by mouth. But sunlight increases the calcium content of the blood without giving calcium by mouth and it does this much more quickly, too. So it prevents rickets.



The best place is a secluded garden.

Your blood is made up of red and white cells. When sunbaths are taken, the number of the red cells is slightly increased, and the white cells more so. These white cells are the ones that attack the germs of disease when they

Lie on your bed in the sun with the window wide open.

invade the body. If they can fight the germs and overcome them, the disease is conquered. If the germs are too many or too strong for the white cells, the disease wins. So when sunbathing increases the number and strength of the cells, it makes the body more able to resist disease.

All over the body are tiny blood vessels, known as capillaries. Under the influence of sun, these capillaries dilate and the blood flows more quickly. This gives you that good-to-be-alive feeling.

When Sunbathing is Harmful

How do you know if sunbathing is doing harm? It is doing you harm, or you are not doing it in the right way, if you get a headache after it. Probably this may only mean that you have thought it was not really necessary to wear a hat. Or it is harmful if you feel tired and lazy after it. This may mean that you cannot stand much sun, or it may mean that you have taken too long a bath. Don't overdo matters in the hope of getting brown quickly.

Dark and fair people vary in the amount of sunlight they can stand at a time. A fair person has to go carefully. There will be a faint pink flush, the beginning of sunburn, over the body. If this should be a deep red, you have had too much sun. This redness may go on to peeling of the skin and may be painful. Sometimes there is œdema or swelling of the body. In any of these cases, stop the sunbathing, or if the reaction, as the flush on the skin is called, is not severe, then reduce the time of exposure of the body.

As you continue, you will find that the body gets sunburnt or bronzed all over. When this happens and you feel well, sunbathing is suiting you.

Sunbathing raises the blood pressure and so people who have a tendency to apoplexy and who suffer with high blood pressure should never take sunbaths. They will make themselves ill. Those who suffer from heart disease also should not sunbathe. The very old cannot stand it, nor as I have said, can tiny babies.

There are some children who never seem to get on. They are not really ill, nor are they well. They have poor appetites and are languid. It is marvellous to see how these children alter when they have been treated by sunshine. They become lively, normal children, with large appetites and plenty of liveliness. They wanted the lifegiving sunshine.

First Aid Hints

MOST EMERGENCIES ARE DEALT WITH IN THE ENCYCLOPEDIA

HERE ARE A FEW EXTRA HINTS

A FIRST-AID outfit should be in every home, ready for any and every emergency. It should contain:—

2 gauze bandages 2½ inches wide.
2 cotton bandages 3 inches wide.
1 roll adhesive plaster 1 inch wide.
Boracic lint ¼—½ yard.
1 ounce of absorbent cotton wool.
1 yard of plain sterile gauze.
Oiled silk ¼ yard.
2 triangular bandages.
Clean scissors.
Needles and safety pins.
Tincture of iodine 1 ounce (antiseptic solution made by adding 1 teaspoonful to 1 pint of water).
Boracic acid powder 1 ounce.
Permanganate of potash tablets.
Sal volatile 1 ounce.
Castor oil 4 ounces.
Epsom salts 1 ounce.
Friar's balsam 1 ounce.
Bicarbonate of soda.
Tannic acid powder (for preparation of 2.5 per cent. aqueous solution).
Zinc ointment.
Clinical thermometer.
Flask of brandy.
If space can be found, add—
Witch hazel extract.
Talcum powder.
Liquid extract of cascara sagrada.
Headache-curing tablets such as Aspirin or Phenacetin.
Camphorated oil.
An eye bath and an enema syringe.

There are certain general principles which must guide those who wish to render competent first aid. Be prompt. Be gentle. Be observant. In the case of a patient who has fallen to the ground, look for signs of hæmorrhage, injury or evidence of poisoning. The pulse and respiration will tell you a great deal. When breathing is free there is clearly no dangerous obstruction to respiration. If the pulse is good and regular, if there is no obvious bleeding or signs of burning about the mouth from poisons, leave the victim where he is until medical help arrives, provided that he is in a place where his life is not endangered.

Interference often does more harm than good as, for instance, in a severe fracture. Indeed, it may prove fatal should the cause be cerebral hæmorrhage. The patient who is conscious may be able to indicate what is wrong. If unconscious, the condition may be

due to fainting, sunstroke, shock, collapse, epilepsy, heart failure, injury or disease of the brain, suffocation or poisoning. Then proceed on these general lines:—

(1) Summon the doctor.
(2) Lay patient on his back.
(3) Allow free ventilation.
(4) Undo all tight clothing and
(5) Keep the patient warm.

Cuts

Arrest bleeding. If cut is small, apply tincture of iodine or Friar's balsam. If large, cleanse immediately, then apply an antiseptic dressing and bandage. A septic cut should be *fomented*.

Ear Ache

A hot rubber water bottle, placed against the ear will ease the pain. Never syringe or drop warm olive oil into the ear without the doctor's advice as it might cause grave infection. A small mustard leaf or blister may be applied behind the ear. If the symptoms are not relieved within eight hours, treat the condition as serious.

Eye (Foreign Body in)

Plunge the face in a basin of warm water, opening and closing the affected eye a number of times. Draw down the lower lid while the patient is looking upward, or turn up the upper lid over a match as he looks down towards his feet, and remove foreign body with a soft handkerchief or a piece of cotton wool. Avoid rubbing. Should the irritation continue, after removal, put in a few drops of castor oil.

Stomach-ache

If severe, *DON'T* give a purge. The condition may be appendicitis, in which case the purge would make matters worse or even superinduce grave peritonitis. While awaiting the doctor, administer one of the following:—(1) Half a teaspoonful of bicarbonate of soda in a cup of warm water. (2) Peppermint water. (3) Bismuth and soda, or (4) Essence of cinnamon or spirit of camphor, four to five drops on a lump of sugar. A little weak spirits is often comforting. For infants, give sips of warm water or dill water. Keep the feet warm and bind a warm flannel to the abdomen. Medical advice should be sought if the ache is not speedily relieved.

Toothache

Dry the gum and paint it with tincture of iodine. Soak some cotton wool, twisted around the end of a matchstick, in clove oil and plunge into the cavity of the tooth. Let it remain for about a minute. If the cavity is large, pack it with cotton wool soaked in spirit of camphor. Place a hot water bottle against cheek of affected side. Take one or two phenacetin tablets and attend the dentist as soon as possible.

Blood From Tooth Socket

Make a firm pad out of a clean handkerchief or gauze and bite on it. If this fails, plug the socket with a narrow strip of gauze or cotton wool soaked in Witch Hazel Extract or alum solution. Press as much packing as possible firmly to the bottom with a fine rod such as a crochet needle. Keep jaws in contact with a four-tailed bandage.

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TO

THE COMPLETE MEDICAL ENCYCLOPEDIA AND HOUSEHOLD DOCTOR

(See Glossary for brief definitions of terms not included in the Text.)

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GLOSSARY

OF MEDICAL TERMS AND DEFINITIONS

Abrasion—A superficial injury resulting in the rubbing off of the skin or mucous membrane.
Acetabulum—The cup-shaped depression in the hip-bone for the reception of the head of the femur or thigh-bone.
Acetanilid—Known popularly as antifebrim.
Achilles' tendon—At the back of the heel, so called because it is said to have been the only vulnerable part of Achilles' body.
Acid—Any substance having a sour taste.
Adipose tissue—Accumulation of fat.
Air cells—The air vesicles forming the substance of the lungs, the ends of the bronchial system.
Allopathy—Method of medical treatment opposed to homeopathy.
Ambidextrous—One who is able to use both hands equally well.
Amyotrophia—Muscular wasting.
Anatomy—The science of the structure and organs of the human body.
Anosmia—Absence of sense of smell.
Aperient—Opening medicine.
Aq. Dist. (abbreviation for aqua distillata)—Distilled water.
Arachnoid membrane—One of the coverings of the brain and spinal cord.
Arthralgia—Neuralgia in a joint.
Arthritis ssturnina—A symptom of lead poisoning.
Aseptic—Free from bacteria.
Asthenopia—Weakness of eyesight.
Astragalus—One of the bones forming the ankle. *See* fig. 1.
Atheroma—A sebaceous cyst containing cheesey material.
Atheroma or atheromatous degeneration—Change in the blood-vessel walls leading to arteriosclerosis.
Atomizer—Apparatus for turning a liquid into form of spray.
Atony—Want of muscular power.
Auricles of heart. *See* fig. 4.
Auscultation—Listening to the act of breathing or the beating of the heart, generally through the stethoscope.
Auto-suggestion—Self-suggestion. Term used in connection with hypnotism. State of mind into which a person can work himself through concentration of his own thoughts.
Autumn catarrh—A form of hay fever occurring in the autumn.
Balneology—The study of various kinds of baths and their effects on the system.
Black Draught—Compound infusion of senna.
Blaud's pill—Contains Iron. Used against anæmia.
Braidism—Hypnotism.
Bromidrosis—Abnormal perspiration, the latter emitting an offensive odour.
Bronchioles—Smallest subdivisions of the bronchi.
Cachet—Flat capsule made of wafers containing powder with objectionable taste or smell.
Cannula—Pointed tube-like instrument for withdrawing fluids from the body.
Capillaries—Minute blood-vessels acting as the connecting link between arteries and veins.
Cardiac—Relating to the heart. For instance, cardiac dropsy means dropsy due to heart disease.
Cardialgia—Pain in the region of the heart, due mostly to flatulent dyspepsia or heartburn.
Carious—Affected with caries.
Carminatives—Medicines which relieve flatulence and colic.
Cartilage—The gristle or elastic substance from which bone is formed.
Casein—The chief proteid of milk.
Cell—1. The original element of protoplasm or beginning of any vital tissue. 2. A single member of a galvanic electric battery.
Cellulitis—Inflammation of skin and the tissues under it. Really a large abscess.
Centrifugalisation—Process for bringing sediment particles to bottom of vessel for purpose of subsequent investigation or microscopical examination.
Cephalalgia—Headache.
Cervical—Pertaining to the neck.
Charbon—Syn. for Anthrax.
Chiropodist—One who treats diseases of the feet—bunions, corns, etc.
Choleric temperament—Easily given to anger.
Choroiditis—Inflammation of the iris, the structure forming the pupil of the eye, and of the choroid, which is the continuation of the iris.
Cicaticial—Scar-like.
Cicatrix—A scar.
Clavicle—Collar-bone. *See* fig. 1.
Climatology—The branch of medicine which deals with climate from the medical point of view.
Clinic (from the Greek word which means bed)—A place where medical instruction is given at the bedside.
Clonus—A succession of involuntary spasmodic muscular contractions.
Coagulation—Clotting (in connection with blood and milk).
Cocainisme—Cocaine habit.
Coccus—A microbe of round shape.
Coccyx—End of spinal column. *See* fig. 2.
Cold cream—Consists of white wax, spermaccti, oil of almonds and rose-water.
Colon—Large intestine.
Concussion—Shock.
Congenital—Existing at birth.
Contra indication—Condition not justifying or permitting a certain mode of treatment.
Contusion—Bruise (wound without the skin being broken).
Convalescence—State of return to health after an illness.
Co-ordination—Co-operation of various organs. Want of co-ordination is a symptom of certain diseases.
Cornea—The transparent front part of the eye.
Costiveness—Constipation.
Coxitis—Inflammation of hip-joint. Hip disease.
Craniotabes—Wasting of skull-bones in infancy due to rickets, syphilis or general atrophy.
Craniotomy—Breaking up the skull of the child in labour when delivery is otherwise impossible.
Crisis—Turning-point in the course of an acute illness, generally for the better, occurring suddenly.
Cutaneous—Pertaining to the skin.
Cyanosis—Bluish discoloration of skin on lips through disturbances in the circulation, as for instance in suffocation.
Cyclic—Periodical.
Cysticercus—The embryo stage of the tapeworm.
Cystoscope—An instrument for inspecting the interior of the bladder.
Cystotomy—Surgical opening of the bladder.

Dacryocystits—Inflammation of the lacrymal (tear) sac.
Debility, nervous—*See* Neurasthenia.
Decubitus—Bedsore.
Defæcation—Evacuation of the bowels.
Deglutition—Act of swallowing.
Dentition—Teething.
Dermatitis—Inflammation of skin.
Desquamation—Shedding of scales from skin after an illness like scarlet fever.
Dextrocardia—Heart on the right side. *See* Transposition of organs.
Dhobie itch—Hindu name for ringworm of body.
Diaphoresis—Marked perspiration.
Diaphoretic—Remedy to procure active perspiration.
Dietetics—Directions on the subject of diet.
Diplococcus—A coccus microbe which occurs in groups of two.
Distomiasis—Worm disease produced by distoma.
Distoma—A kind of worm present in the blood and causing anæmia, bloody urine, and other symptoms. Prevalent in the tropics.
Diuretics—Remedies given to facilitate flow of urine.
Dosage—Regulation of proper doses.
Dose—The quantity of medicine to be taken at one time.
Drachm or **Dram**—$\frac{1}{8}$ of an ounce or 60 grains. About a teaspoonful.
Draught, black—Compound infusion of senna.
Dumbness—*See* Deaf-Mutism.
Dura mater—The outermost covering membrane of the brain and spinal cord.
Dyspnœa—Difficult breathing.

Ecthyma—A pustular form of skin eruption.
Ectropion—Outward rolling of the eyelid so that the conjunctiva becomes visible.
Electro-therapeutics—The art of treating disease by electricity.
Electuary—A soft mass made of sugar, honey, etc., and containing a medicinal substance.
Emmetropia—Normal or perfect eyesight.
Emollient—A substance used to soften the skin, for instance lanolin, vaseline, olive oil, etc.
Emulsion—A liquid containing some insoluble medicinal substance in suspension.
Enamel—The highly dense covering substance of the visible part of a tooth.
Encephalitis—Inflammation of the brain.
Endemic diseases—Prevalent more or less constantly in a particular locality, for instance cholera in India.
Endoscope—Instrument for examining internal parts of the body, for instance bladder, rectum, etc., with the aid of a small electric lamp attached at the end of it.
Engorgement—Congestion of a part through excess of blood.
Enterostomy—Operative opening of the bowel through the abdominal wall.
Entero-colitis—Form of enteritis in which both the small and large bowels are involved.
Epidemic—Affecting large numbers of people.
Epidemic disease—One which breaks out periodically and attacks large numbers.
Epidermis (consisting of epithelium)—The most outward layer of the skin.
Epiglottis—Cartilaginous structure covering the glottis (*See* fig. 6) or vocal cords to prevent entrance of food, etc., into larynx.
Epilation—Extraction of hair.
Epilatory—Remedy for removing superfluous hairs.
Epithelium—The upper layer of the skin or mucous membrane.
Epsom salt—Sulphate of magnesia.
Erection—Raising through engorgement or increased blood supply.
Escharotic—Caustic producing a slough.
Ethics, medical—The principles which guide doctors in their relations to one another and to the public.
Euthanasia—Peaceful death.
Exacerbation—An increase in the severity of a symptom or disease.
Excision—Cutting out of a part bone, joint, etc.
Excoriation—Abrasion of the skin.
Excrescence—An abnormal outgrowth.
Exophthalmos—Protrusion of the eye-balls to an abnormal extent.
Expectorant—Remedy to favour or produce expectoration.
Expectoration—The substance from the throat and lungs expelled by coughing and spitting.
Expiration,—The act of expelling the breath.
Extension—Straightening out of a limb.
External and Internal—In surgery and anatomy, the side away from or nearest to the middle line of the body respectively.
Extirpation—Complete removal of a part, a tumour, etc.
Eye-teeth—Canine teeth.

Facies' hippocratica—Appearance indicative of approaching death. Pinched nose, livid skin, sunken eyes, cold ears, drooping lips, hollow temples.
Faith cure and faith healing—Generally referred to mental suggestion.
Fascia—Tissue beneath the skin or between muscles.
Farinaceous—Of the nature of flour.
Febrile—Feverish.
Ferrier's snuff—A mixture of morphia acacia and bismuth in powder form, much used in catarrhal affections.
Fibula—One of the two bones constituting the leg. *See* figs. 1 and 2.
Femur—The thigh bone. *See* figs. 1 and 2.
Flexor muscles—Those which bend a limb or part of a limb.
Fluctuation—Sensation of undulation of fluid when a part is tapped between the fingers.
Fluorescence—Property of certain substances to convert certain obscure rays into luminous ones, term used in connection with the X-rays.
Flux—Term used occasionally to denote diarrhœa or dysentery.
Follicle—A small gland in the tissues in the form of a little sac., for instance, the hair follicles from which the hairs emerge.
Folliculitis—Inflammation of hair follicles. *See* Acne.
Fontanelles—The membranous spaces felt on the skull of newly-born children and which become bony afterwards.
Forensic medicine—Medical jurisprudence, the science of medicine in its relation to law.
Formication—Creeping sensation, "Pins and needles." A symptom of nervous diseases.
Frenum—The small string of membrane situated under the tongue, and also that situated under the glans of the penis.
Friar's balsam—Compound tincture of benzion.

Galvanocautery—Cauterisation by means of galvanic current.
Gastrectasia—Dilatation of stomach.
Gastric—Relating to the stomach.
Gastrodynia—Pain in region of stomach.
Gastro-enteritis—Inflammation of stomach and bowels.
Gastroenterostomy—A frequently performed operation by which a new communication is established between the stomach and the small intestines.
Gastroptosis—Dropping or displacement downwards of the stomach.

Gastroscope—Instrument for internal illumination and examination of the stomach.
Genu valgum—Knock-knee.
Genu-varum—Bow-knee or bow-leg.
Germicidal—Destroying germs (disinfectants).
Gibbus—Hump back.
Glauber salt—Sulphate of soda.
Glioma—A form of tumour consisting of nervous tissue and occurring in the brain, spinal cord, and retina of the eye.
Glottis—The slit between the vocal cord (*See* fig. 6).
Glucose or grape sugar—A form of sugar present in many fruits and the one contained in the urine of diabetic patients.
Gluteal—Relating to the buttocks.
Gonarthritis—Inflammation of knee-joint.
Goulard's extract—A lead lotion containing lead acetate 180 parts, lead oxide 110 parts, distilled water 710 parts. Is used diluted.
Granulation tissue—Material formed during process of wound-healing.
Grape sugar disease—*See* Diabetes.
Gravid (uterus)—Pregnant.
Gravity, specific—Weight of a substance in comparison to that of an equal volume of distilled water.
Gregory's powder—Compound rhubarb powder.
Grey powder—Mercury with chalk.
Grinder's asthma—A chronic inflammation of the lungs, resulting from inhalation of particles of dust.
Grippe—Influenza.

Hæmic murmurs—Murmurs at the heart not due to organic disease but to altered condition of the circulation.
Hæmostatics—Remedies which arrest hæmorrhage.
Hallux valgus—Displacement of great toe forming bunion.
Hæmoglobin—The colouring matter of the red blood corpuscles.
Heberden's nodes—Deformities of the fingers in gout and arthritis deformans.
Hebetude—Dullness of intellect during fever or other grave illnesses.
Helminthiasis—Presence of worms in the system.
Hepatitis—Inflammation of liver.
Hirsuties—Excessive growth of hair.
Hives—A vague term which includes almost any known disease, especially a skin eruption or a croupy cough.
Hoffmann's anodyne—A sedative remedy consisting of ether, alcohol and volatile oils. Dose 30–120 minims. Useful in spasms, asthma, etc.
Homeopathy—System of treatment by remedies which when given to a healthy person produce symptoms similar to those of the respective disease.
Hydropericardium—Dropsy over the heart.
Hydrops articuli—Dropsy in a joint.
Hydrothorax—Dropsy of the pleura (form of pleurisy)
Hyoid bone—*See* fig. 6.
Hyperacidity—Excessive acidity.
Hyperplasia—Excessive formation of tissue (tumour).
Hypnotics—Remedies given to procure sleep, including bromides, sulphonal, veronal, paraldehyde, chloral hydrate, opium, chloroform, adalin, etc., etc.
Hypodermic medication—Treatment by injection of substances into the skin.

Idiopathic—Not dependent upon a known cause or some other disease.
Idiosyncrasy—Individual peculiarity.
Illusion—False interpretation of an actual perception, to some extent synonymous with hallucination.
Immunity—Exemption from disease acquired through previous disease or protective inoculation, for instance in the case of smallpox.
Inanition—Wasting of the body through starvation.
Incipient—Commencing.
Incipient phthisis—Early stage of consumption.
Incubation of disease—Period between infection and outbreak of first symptoms.
Incus—One of the little bones of the middle ear.
Infarct—A wedge-shaped area of obstruction caused by hæmorrhage into an organ, for instance the lungs.
Infusion—1. Extraction of active principles of a drug by water without boiling. 2. The fluid prepared by infusion.
Inguinal—Pertaining to the groin.
Intubation—Introduction of a tube into the larynx to prevent suffocation, as practised in diphtheria.
Inoculation—Introduction of disease germs into the body to prevent occurrence of the same disease.
Inspiration—The act of drawing in the breath.
Instep—The arch formed by the foot when flat on the ground.
Instillation—Dropping of a liquid into a cavity or vessel.
Instinct—Natural impulse.
Insufflation—Blowing of a powder into a cavity. Blowing air into the mouth of a person threatened with suffocation.
Integument—The skin.
Intercostal—Between the ribs.
Intestines—The bowels. *See* figs. 3, 8, 9.
Intoxication—1. Poisoning in general. 2. Drunkenness.
Intramuscular—Within the substance of a muscle.
Intraocular—Within the eye.
Intravenous injection—Direct into a vein.
Intussusception—Slipping of a part of the intestine into the part beyond it, causing intestinal obstruction.
Ion—An element set free by electrolysis and introduced into the system.
Ionisation—Method of treatment by electrical decomposition of drugs or substances into ions and introduction of the latter into the system.
Iridectomy—Operation on the eye, for removing part of the iris.
Ischias.—Sciatica.
Isotonic—Of equal density.
Isotonic salt solution—Equal in density to blood serum.

Jactitation—Tossing about by the patient during feverish conditions, and in other severe illnesses.
Jugular vein—*See* fig. 4.

Kataphoresis—*See* Cataphoresis.
Keloid—Outgrowth on the skin generally at the site of a scar, crab-like in appearance.
Keratosis—Hardened skin.
Kernig's sign—A sign of meningitis; when the patient is sitting he cannot extend the leg fully.

Lactose—Sugar of milk.
Laminectomy—Operative removal of portions of vertebral bones.
Lancinating pains or lightning pains—Sharply shooting pains, for instance in locomotor ataxy.
Lardaceous—*See* Amyloid.
Laudanum—Tincture of opium.
Laughing gas—Nitrous oxide.
Leontiasis—Lion-like appearance of the face as seen in leprosy.
Lesion—Injury.
Lethal—Fatal, deadly.
Ligaments—Flexible bands connecting together the ends of bones forming a joint.
Lipomatosis—General obesity.
Lithiasis—Formation of calculi or stones in various organs, for instance kidney, gall bladder, etc.

Litmus paper—When red, it turns blue on being steeped in an alkaline solution; when blue, it turns red on being steeped in an acid solution.

Malleus—One of the little bones of the middle ear.
Malnutrition—General wasting resulting from imperfect or insufficient nutrition.
Maxilla—The bone of the upper or lower jaw.
Mechano therapy—Treatment of diseases or injuries by mechanical appliances.
Mediastinum—Space in the middle of the chest in which the heart is situated.
Medical diseases—Are treated by physicians and by other than surgical measures.
Medicament—Medicinal substance.
Medication—Treatment by medicines.
Medicine—1. The science of treating disease. 2. A substance given for curing a disease.
Medico (legal)—A point relating both to medicine and law.
Medulla oblongata—*See* fig. 7. Upper end of spinal cord.
Meninges—The membranes which cover the brain and spinal cord.
Mesentery—Portion of the peritoneum which keeps the intestines in position. *See* fig. 3.
Mesmerism—Hypnotism.
Metabolism—The combination of changes which food undergoes in the system before it is transformed into bodily energy.
Metacarpal bones—The five bones which lie between the wrist and the fingers. *See* fig. 2.
Metamorphosis—Structural change.
Metatarsal bones—*See* fig. 2. The five bones between the ankles and the toes.
Microcephalus—Abnormal smallness of head.
Micrococcus—Microbes of spherical shape.
Micromania—Form of insanity in which the victim thinks he is of very small size.
Micron—The unit of microscopic measurement, on millionth part of a meter.
Micro-organism—Living structure, animal or vegetable, of mocroscopic size.
Microphthalmos—An abnormally small eye.
Microscope—Apparatus consisting of groups of lenses by which very minute structures are made visible.
Miner's elbow—Inflammation of the bursa over the projecting bone of the elbow.
Monoplegia—Paralysis of a single limb or of a single set of muscles.
Morbid—Diseased, pertaining to disease.
Morphinism—*See* Morphinomania.
Morton's disease—A rare affection of the skin resembling anæsthetic leprosy; affects mostly the hands. The cause lies in disease of the spinal cord.
Mucous membranes—Coverings of cavities like the mouth, etc., being a continuation of the skin.
Myasthenia—Muscular weakness.
Mydriatics—Remedies used for the dilatation of the pupil, for instance belladonna.
Myotics—Remedies causing contraction of pupil of the eye, for instance pilocarpin.

Narcomania—An insensate craving for narcotics.
Narcosis—Unconsciousness produced by a narcotic drug or an anæsthetic.
Narcotic—Remedy which produces unconsciousness.
Nausea—Sickness with tendency to vomit.
Nematode—Threadworm.
Nephrectomy—Removal of the kidney.
Nephrolith—Stone in the kidney.
Nephroptosis—Movable kidney.
Neuropathic—Relating to nervous diseases.
Numbness—Loss of sensation through cold or compression or disease of the nervous system.

Obstetrics—Branch of medicine concerned with midwifery.
Occupation neuroses—Functional nervous diseases due to the nature of employment, for instance writer's cramp.
Ocular—Relating to the eyes.
Ophthalmologist—Specialist in eye diseases.
Opiate—A preparation of opium, given to induce sleep or alleviate pain.
Opisthotonus—*See* Tetanus.
Opium habit—*See* Morphinomania.
Organic diseases—*See* under Functional diseases.
Os—Mouth or opening.
Ostitis deformans—A rare senile disease characterised by enlargement and deformities of the bones in various parts of the body.
Osteoma—Bony tumour.
Otitis—Inflammation of the ear.

Paget's disease—Ostitis deformans.
Painters' colic—*See* under Lead poisoning.
Palliative—Remedy which relieves suffering or pain, but only temporarily.
Palpation—Examination of a part with one or both hands to ascertain the presence of tumours, etc., under the surface.
Palpebral—Relating to the eyelids.
Palpitation—Throbbing action of the heart of which the patient is conscious.
Palsy—Paralysis.
Paludial—Malarial.
Panacea—A cure-all, a remedy which claims to cure all diseases.
Panarthritis—Inflammation of all the parts of a joint.
Pancreatitus—Inflammation of the pancreas.
Pandemic—Epidemic over an extensive area.
Panicculus adiposus—A layer or accumulation of fat.
Pannus—Development of blood-vessels in the cornea of the eye through disease; normally, it has none.
Panaritium—Whitlow.
Papilloma—A benign (non-malignant) tumour of the skin.
Papule—A small, solid prominence on the skin.
Paracentesis—Tapping or liberation of fluid from some portion of the body, as for instance in dropsy or hydrocele.
Paradysentery—Mild form of dysentery.
Paranoia—Mental aberration.
Paregoric—Popular name of camphorated tincture of opium.
Paroxysm—Sudden and severe attack, for instance of pain.
Parulis—Gumboil.
Pathology—Study of diseased structures.
Pearl disease (Perlsucht)—Name for tuberculosis in animals, chiefly cattle.
Pectoral—Relating to the chest.
Pelvis—The cavity formed by the hip-bones in which the lower abdominal organs are situated.
Pepsin—The ferment of gastric juice which assists in digestion.
Percussion—Striking a part with the finger to test the resonance of the organs beneath it.
Pericardium—Covering membrane of heart.
Periphery—The external surface or circumference.
Peristalsis—Wave-like movements and contractions of the bowels which gradually expel their contents.
Pernio—Chilblain.
Petechia—A small spot on the skin such as that caused by a flea-bite.
Phalanx (plural, phalanges)—One of the bones of the fingers or toes.
Pharmacopœa—Official catalogue of drugs and their doses and of the methods of their preparation.
Pharmacy—The art of preparing and dispensing medicines and drugs.
Pharynx—The cavity at the back of the nose, mouth and larynx. *See* figs. 6 and 7.
Phenol—Carbolic acid.

Phleboliths—Small stony concretions found in veins.
Phlebotomy—Opening of a vein for purposes of blood-letting.
Phobia—Obsession or fear.
Physician—A doctor who specialises in medicine or internal diseases.
Physiology—The science which deals with the functions of human and animal organs.
Pia mater—The membrane which encloses the brain and spinal cord.
Pink-eye—A severe form of conjunctivitis occurring especially in horses.
Podagra—Gout in the feet.
Polydactylism—Presence of more than the normal number of fingers or toes.
Polyvalent serum—Obtained from animals treated with several kinds of bacteria.
Pomade—A perfumed ointment for use on the scalp.
Prodrome—A symptom indicating the approach of a disease.
Prognosis—The outlook in a case of disease as regards its length or termination.
Prophylactic—Remedy used for prevention of disease.
Proprietary medicine—One that is patented or of secret composition.
Prosopalgia—Neuralgia of the face.
Protoplasm—The material which constitutes the essence of living cells and on which all vital functions of the body depend.
Protozoon—Lowest specimen of the animal kingdom.
Pseudo—False, e.g., pseudo-epilepsy, a disease simulating epilepsy.
Pubes—Front bones of the pelvis. *See* fig. 1.
Purulent—Having the character of pus or abscess matter.
Pus—Semi-liquid matter formed in an abscess.
Pustule—A pimple containing pus.
Putrefaction—Decomposition of organic matter due to microbial influences. Evolution of evil-smelling gases.
Pyelitis—Inflammation of interior of kidneys.
Pyogenic—Pus-producing.

Radiant—Emitting rays.
Rales—Sounds heard over the chest during respiration. They denote the presence of disease of the lungs—acute or chronic.
Reader's cramp—Cramp in the eyes after prolonged reading.
Reagent, Chemical—A substance with which tests are performed.
Recipe—Prescription or formula for preparing a mixture, etc.
Recrudescence—Increase in severity of symptoms of a disease after a temporary decrease.
Refraction—Power of eye to adjust itself to normal vision.
Regurgitation—Flow-back of blood through a diseased valve of the heart.
Retropharyngeal abscess—Abscess at the back of the throat proceeding from the vertebral bones.
Run-down feeling—*See* Neurasthenia.

Sacrum—The bone at the back of the pelvis formed by the five sacral vertebræ. *See* fig. 2.
Sal volatile—Ammonium carbonate.
Sapræmia—Form of septicæmia due to absorption of putrefaction substances.
Saturnism—Lead poisoning.
Scapula—Shoulder-blade. *See* fig. 2.
Scirrhus—Hard form of cancer.
Scleritis—Inflammation of sclerotic of the eye. *See* fig. 9.
Scurf—The popular name for the bran-like scales in dandruff.
Sedative—A remedy which quietens a state of irritation.
Sediment—Deposit which settles at the bottom of a liquid
Sepsis—Septicæmia.
Sequel or sequela—Consequence of a disease
Sessile tumour—With broad base and without pedicle.
Seven day fever—Relapsing fever.
Shoemaker's cramp—A disease of occupation like writer's cramp.
Skeleton—The bony framework supporting the structures of the body. *See* figs. 1 and 2.
Skiagram—X-ray picture.
Slough—Gangrenous mass.
Spastic paralysis—P. with rigidity of muscles.
Spatula—A flat blade used for spreading ointments.
Spectrum analysis—Determination of the character of certain substances by their behaviour towards prismatic decomposition of light.
Spermatocelle—Form of hydrocele containing semina fluid.
Sphincter—A circular muscle round an aperture which dilates or contracts to either open or close the same. Examples: anus, vagina, bladder.
Sphymograph—An instrument which records the character of the pulse in the form of tracings.
Splint—Piece of wood, metal. or other material for keeping the ends of a fractured bone, or any other movable part, in a fixed position of rest.
Spongiopilin—An absorbing material of cloth and sponge used for poulticing, etc.
Sporadic—Occurring in an isolated or scattered manner as opposed to epidemic.
Spore—Reproductive body of lower vegetable organisms, such as bacteria.
Spring-fever—Hay-fever.
Spring-finger—Lock-finger.
Squamous—Scaly.
Stapes—One of the little bones in the middle ear, the other two being the incus and the malleus.
Staphylococcus—Bacteria forming bunches.
Staphyloma—Bulging of the cornea of the eye.
Stasis—Standstill, for instance, of the blood circulation.
Stenosis—Constriction or narrowing of an orifice.
Stercoraceous—Having the character of fæces.
Sterilization—1. To render an article free from bacteria by heat or disinfection.
Sternum—The breast-bone. *See* fig. 1.
Sternutation—Act of sneezing.
Sternutatories—Substances, like snuff or pepper which give rise to sneezing.
Stethoscope—Instrument for listening whether the sounds produced by the lungs and heart are normal or not.
Streptococcus—Bacteria forming chains
Stupe—Cloth wrung out of hot water and sprinkled with a counter-irritant substance like turpentine.
Stupor—Partial unconsciousness.
Styptic—Remedy which arrests hæmorrhage.
Sub-acute—Moderately acute.
Subluxation—Incomplete dislocation.
Submaxillary—Under the lower jaw.
Sudoriparous glands—Sweat glands.
Supra-orbital—Above the orbit.
Surgeon—A doctor who specialises in external diseases or internal diseases requiring an operation.
Surgical diseases—are treated by surgeons and by surgical measures, such as operations.
Sympathetic Ophthalmia—Inflammation of one eye subsequent to that of the other.
Symphysiotomy—Operation of dividing the junction of the two pubic bones to enable child-birth to take place. *See* fig. 1.

Tabes mesenterica—Consumption of the bowels. Intestinal tuberculosis.
Tabetic—A person suffering from locomotor-ataxy.

Tampon—Plug of cotton wool or other material.
Tarsus—The bones constituting the heel and parts of the sole.
Tartar (on teeth)—Mineral and organic deposits derived principally from the saliva.
Taxis—Reduction of hernia.
Temple—Portion of the head behind the eye and above the ear. Situated over the temporal bone.
Temporal bone—*See* fig. 1
Teratoma—A tumour containing teeth, hair, etc., occurring frequently in the ovary.
Terrian-cure—Treatment by graduated mountain climbing in obesity and other diseases.
Thenar eminence—The fleshy prominence at the base of the thumb in the palm of the hand.
Therapeutics—Branch of medicine dealing with treatment of diseases.
Thoracic—Pertaining to the thorax or chest.
Tibia—Shin-bone.
Tic convulsif—Spasm of the muscles of the face, as for instance, in chorea.
Tissue—The structure forming an organ or any other part of the body.
Tissue, adipose—Tissue containing a large element of fat.
Tone—Normal state of tension of a part or of the whole body.
Toxæmia—Blood poisoning.
Toxic—Due to some poison.
Toxicology—Science of nature and effects of poisons.
Toxin—Poisonous substance of animal or vegetable origin.
Trifacial or trigeminal nerve—Supplies the nerves of the face which are subject to neuralgia.
Trigger-finger—Condition in which a finger cannot be bent or stretched properly or in which it can only be done with a jerk.
Trochanter—The upper projecting end of the thigh-bone.
Turbinectomy—Removal of so-called turbinated bones in the nose.
Tympanites—Distension of abdomen through accumulation of gas.

Unguent—Ointment.
Unguinal—Nail-like.
Uranalysis—Examination of urine.
Uricacidæmia—Uric acid diathesis.

Vascular—Provided with bloodvessels.
Vasomotor (nerves)—Regulating the tension of blood-vessels thereby increasing or lessening the blood pressure.
Viable—Capable of living.
Vincent's angina—False croup.
Virus—Poison of an infectious disease.
Viscid—Sticky, gelatinous.
Viscus (*plural* **viscera**)—An organ, especially one in the abdomen.
Vitreous humour—A transparent jelly-like substance which fills the interior of the eye-ball, behind the lens.
Vitriol—Sulphuric acid.
Vivisection—Experimentation upon an animal whilst still alive. Usually done under an anæsthetic.
Vocal cords—Two membranes in the larynx forming a slit called the glottis through which the air passes. The sound of the voice is produced by the movements of the vocal cords. *See* fig. 6.
Vomer—A small and thin bony plate situated vertically between the two nasal cavities.
Vulcanite—Rubber treated with sulphur at a high temperature

Washerwoman's itch—Form of eczema.
Watchmaker's cramp—Disease of occupation.
Wen—Sebaceous cyst.

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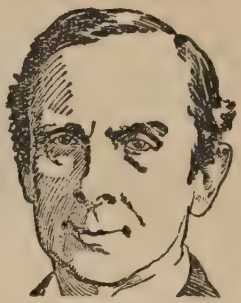

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A Message of HEARING for the DEAF!

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IF hard-of-hearing you must avoid becoming very deaf—and if already very deaf, stone deafness, being the next stage, must be avoided whatever the effort—because hearing is so vital to your very existence—to your well-being.
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"I Simply Must Sit Down!"

That Awful Fatigue! Do You Know It?
That Agonising Pain! Have You Suffered It?

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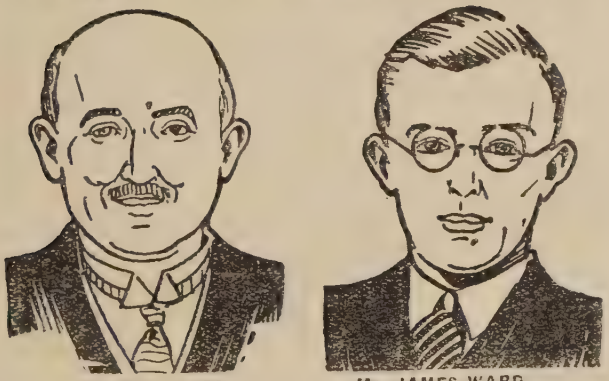

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ONE of the greatest medical discoveries of recent years is that nearly all stubborn, everyday ailments arise from the same cause—and can be cured by the same simple means.

That cause is poison in the blood—due to fats, starches and sugars being only partly digested—and these poisons may affect skin, muscles, nerves, brain, or any other organ of the body, causing such varied diseases as:

Eczema	**Nerves**	**Wasting**
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Boils, Gout	**Insomnia**	**Constipation**
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Glands	**Debility**	**Gastritis, etc.**
Neuritis	**Neurasthenia**	**Acidity**

All that is needed to ensure **complete** digestion, and so prevent the production of these poisonous by-products, is a natural food principle known as Vitamin-B. This is found in many plants, but most plentifully of all in yeast. This wonderful substance has now been made available to everybody by the leading British yeast producers in inexpensive small tablets with a pleasant "nutty" flavour. They are sold by all chemists as "YESTAMIN" Tablets, a full fortnight's course of treatment costing only one shilling, and they are guaranteed to consist of pure yeast only, prepared in a special way, so that the Vitamin-B is preserved in all its potency.

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1. **Do you suffer from Psoriasis?**
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3. **Are there Eruptions or Matted Scales on the scalp?**
4. **Is there dreadful Itchiness?**
5. **Have you Boils or Abscesses?**
6. **Is the skin red, inflamed, or Eczematous?**
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8. **Are there Eruptions on the Knees, Elbows, or Body?**
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If you suffer from any of these skin troubles Tremol Treatment is

THE RIGHT TREATMENT FOR YOU.

Thousands of cases similar to the above have been cured. This is an opportunity not to be missed. It is just what you are looking for. The means of bringing about your definite recovery. The Treatment can be carried out in your own home with complete success and without neglecting your work for a single day.

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THERE is no infirmity so distressing either to the sufferer or to those around him, as epilepsy and those kindred nervous complaints which, recurring more violently and unexpectedly at shortening intervals, render the life of the sufferer one round of misery.

IT HAS LONG BEEN SUPPOSED THAT FITS WERE NOT CURABLE, AND MANY AN UNFORTUNATE SUFFERER HAS SPENT LARGE SUMS IN SEARCH OF THE ALLEVIATION THAT ORDINARY REMEDIES, HOWEVER EXPENSIVELY PRICED, CAN NEVER BRING.

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Such complaints yield instantly to the magic inward radiation of Dols' Flannel. A soft, fleecy fabric, its gently penetrating influence reaches the very roots of the pain, bringing immediate and lasting ease. Thousands of testimonials from grateful wearers. Any length cut, 14/- per yard, or Fittings and Garments for any part of the body. SOX for Cold Feet and Chilblains, 1/3 pair. From Boots and other leading Chemists. In case of difficu.ty write: DOLS' VOLATALISE FLANNEL LTD., Viaduct Street, HUDDERSFIELD.

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for SKIN TROUBLES
Also an INVALUABLE BALM
for SORE THROATS & CHEST COMPLAINTS
"Rub it in"

A FAVOURITE REMEDY FOR 70 YEARS

For all Skin Complaints, BRUISES, CHILBLAINS, PILES, Etc. In dainty jars, 1/3, 3/-, 5/-.
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